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ORIGINAL CONTRIBUTIONS.

ACUTE RHINITIS.*

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Notwithstanding the fact that each one of us, with more or less frequency, demonstrates in his own person the process known as "taking cold," and notwithstanding all that careful study and research has established regarding the nature of this morbid process, our understanding of it is still rather vague, and we often use the phrase very loosely. The process, "taking cold," may be said to occur when some portion of the body, unaccustomed to a sudden change of temperature, is subjected to the influence of cold, and the capillaries of the exposed part do not contract, or contract too late to prevent a cooling of the blood-vessel contents. In this way a disturbance is excited in the relation between the body heat production and heat radiation. Each individual has some locality of less resistance; very rare and exceptional are those hardened people who have no vulnerable Achilles heel. Given, then, a disturbance by which, in some part of the body more or less remote, there is a checking of the heat radiation with no corresponding change of heat production, there will occur at once a congestion, hypernutrition, and inflammation at that point where the tone of the vessels is impaired and offers least resistance. The majority of people whose nasal mucosæ are subjected to sudden changes of temperature, humidity, and purity of the air they breathe, acquire a condition of mild chronic inflammation of the mucous membrane peculiarly susceptible to the influence of vasomotor disturbances.

The subject of this paper confines our attention alone to such

* Read before the Wayne County Medical Society.

disturbances as affect the upper air-passages, though conditions the same in character may be similarly excited in the pleura, intestine, urinary bladder, or wherever near or remote in the body a weakened resistance is present.

Colds are not caused by a sudden exposure to an absolutely low temperature. They are more apt to occur in a temperature moderately low, about or above the freezing point, when either the air is well saturated with moisture or the skin itself is damp; and a moderate exposure of which the individual is not at first conscious is apt to be more conducive to taking cold than a decided voluntary exposure. In the former case the irritation produced by lower temperature is at work on the dilated capillaries before the fact comes to consciousness. As Dr. Jager, of woolen underwear fame, has remarked, the nerves of the skin observe too late that the cold irritation is present. Whether his natural wool product will prove an always sure preventive, grave doubts may be felt. We are naturally suspicious of any hypothesis that introduces a possible commercial transaction. Professor Behring, who has recently foresworn his connection with the medical profession, could never again hold our serious attention, no matter what he might offer. But I have no underwear to sell, and I feel I may safely ask you to consider in gravity the prevention and treatment of acute rhinitis.

The whole trend of the bacteriological research which has been carried on in reference to the nasal bacteria has been negative so far as showing specific germs as a cause of ordinary rhinitis is concerned. Some of the earlier observers along this line reported finding a considerable number and variety of bacteria on the nasal mucosæ, but later observers, with a more perfect technique, have found that while bacteria are usually present in the nasal vestibule, and in some cases farther back in the nares, the comparatively aseptic nasal secretion rapidly washes them down and prevents their lodgment in the nose. Drs. Wright and Park read before the last meeting of the American Laryngological Association an interesting article on the subject of the bacteria of the nose. Their technique in making observations was very thorough and well designed to exclude adventitious germs.

In one series of thirty-six cases examined by these observers bacteria were found in thirty, but were not found in the other six. In no case could they isolate any germs that were present in sufficient numbers to have any deleterious effect on the nasal mucous membrane. They further determined that while not actively bactericidal, the serum which is secreted continuously in the nose has certain aseptic properties, or at least is not a good culture medium for the germs usually carried in the atmosphere. They found:

1. That clear serum draining down from regions to which the inspired air does not have ready access washes away bacteria deposited by the tidal air.

2. That the cilia supplemented this action of gravity.

3. That the vibrissæ of the vestibule when present filtered the inspired air.

4. That ordinarily the inspired air contained few pathogenic germs accustomed to grow in body fluids.

The dust-laden atmosphere of theaters, reception rooms, public halls, and churches is a constant source of irritation. If one examines the nasal fossæ of a patient who has just attended a theatrical matinée, and wipes out the nares with an application, he will usually find an accumulation of black dirt that would of itself, without exposure to undue changes of temperature, seem likely to give rise to an attack of rhinitis. And yet these sources of irritation do not seem to be actively causative, and the patient does not have an acute rhinitis as the result of such an experience, unless there has been some disturbance of the relation between heat production and heat radiation.

Clinically, an acute rhinitis consists of three stages, which may be termed:

1. A prodromal stage marked by general disturbance. There is rarely a decided chill, but usually chilly sensations are felt, pains in the bones, a feeling of lassitude, and perhaps a headache. These symptoms usually occur before the local inflammation shows itself. These various general symptoms would seem to teach us that an acute rhinitis comes about through a general disturbance — that is, that the exposure to cold acts indirectly through the central nervous system.

2. In the second stage, which may last from six to twenty hours, the vascular spaces in the turbinated bodies and all the vessels in the mucous membrane are immensely congested, but secretion is practically checked, and there is a sense of dryness and sometimes painful discomfort in the nose.

3. The stage of hypersecretion. At first a watery secretion, often quite irritating to the skin of the nostrils and lip, is poured out in abundance. After a day or two this becomes a thicker, more natural mucous secretion, which still later is likely to take on mucopurulent characteristics.

The constitutional symptoms usually disappear when secretion is well established, so that while we have at first a general disturbance in which the central nervous system plays a part, later we have to deal only with a local condition.

The hygienic prophylaxis which may aid the individual to avoid

recurrent attacks of rhinitis is often difficult to postulate for each patient on account of personal peculiarities. Undoubtedly the most successful prophylactic measures are those which increase the patient's power of resistance rather than those measures calculated to coddle and protect from exposure. If the cutaneous capillaries are trained to contract promptly, trained by suitable bathing and friction to maintain a certain healthful degree of tonicity, the individual may secure a very fair modicum of immunity. The clothing should be just sufficient to protect the body from cold. We are prone to wear too much rather than not enough. The fact should be borne in mind that our best protection comes not from adapting our clothing to the various fluctuations of temperature, but in so inuring our bodies that we can meet these constant changes of weather with impunity. The individual who always puts on an extra garment with every fall of five or ten degrees in the temperature is invariably the one who suffers most from the cold.

I can only speak of extra protections for the chest and mufflers for the neck to condemn them utterly for the average individual. The feet, however, should always be carefully protected, not by an excessive covering, but by a protection on the soles calculated to avoid the menace lurking in damp and cold pavements. And in wet weather the soles should be protected by rubber. It is the dampness of moderately cold weather against which protection should be had, rather than the dry cold of very low temperature.

An examination of the nose will often reveal a spur, a deviation of the septum, or some other obstructive condition present in the nares or rhinopharynx, and suitable operative treatment of this morbid condition may secure the patient immunity from attacks of rhinitis by doing away with a point of lessened resistance.

Inasmuch as the primary condition in a cold affects the general system, being a disturbance of heat production, any efforts at abortive treatment should be directed against the general condition rather than the local manifestation. Hot drinks internally with the hot foot-bath furnish the easiest and probably most effective means of restoring heat production. The diaphoresis thus established is not of so much importance in itself, but the profuse perspiration is an evidence to us that the equilibrium of heat production has been restored throughout the body. The full hot bath or the Turkish bath are not so valuable as the foot-bath, because they are attended by much greater body exposure and because they are more likely to be followed by a lassitude that is not conducive to the maintenance of a good capillary tone.

Internally I have obtained the best results from the administration of the following combination:

Podophyllin	1-12 grain.
Calomel	¼ grain.
Sod. bicarb	1 grain.
Dover's powder	10 grains.

The first three are combined in one tablet and the Dover's powder in two five-grain compressed tablets. This combination is to be taken at night at the time the heat is used. The following morning the patient is directed to take a Seidlitz powder, or a glass of Hunyadi, Apenta, or other water, sufficient to secure a mild laxative effect. Another combination which I have found afforded patients a great deal of comfort consists of a mixture of codeine sulphate, phenacetin, salol, and caffeine citrate. These various drugs are combined in varying proportions to meet individual cases, but always with a view to having small doses frequently repeated.

If we can see the patient promptly and begin active general treatment in the first stage, we can do much to abort the later local manifestations. Quinine is often recommended and sometimes in large doses, but I have failed to see any special benefit from its use in either large or small doses. In the initial stage, when the general system is affected by impaired heat production, the administration of such an antipyretic as quinine is usually attended by a good deal of discomfort, because it has a tendency to further disturb heat production. Later on the trouble becomes a purely local manifestation, and surely then the quinine can have no beneficial effect. When, too, the mucous membrane lining the nares, pharynx, and Eustachian tubes is congested and inflamed, the administration of large doses of quinine may have a decidedly baneful effect upon the internal ear.

In the second stage of a cold, when the nasal mucosa is congested and dry, nothing of an astringent or irritating nature should be used locally. The best application in the form of spray or douche is at this stage a very mild alkaline solution. Dobell's solution in half strength is one of the blandest and most agreeable solutions at hand. Such an application will tend to hasten the introduction of the third stage, that of hypersecretion. Here we have only to deal with a congested mucous tissue that is throwing out, not an unnatural secretion, but a normal secretion excessive in amount. At this stage it is well to make astringent applications. A little measure which often affords a good deal of relief from the slight reaction to which it gives rise consists in slightly cauterizing with a chromic acid bead fused on an applicator an area on the lower border of the inferior turbinate not over one-eighth or one-quarter of an inch in extent. There is a prompt reaction, soon followed by a general contraction of the tissue, not confined to the spot on which the application was made.

Watery sprays of an astringent nature should be mild, and the oily

sprays by which they are usually followed should be only very slightly stimulating. The latter spray should be more a protective than a stimulant.

For patients who cannot visit the physician's office a powder to be used for insufflation or as a snuff may be used to advantage when the stage of hypersecretion is reached. The following formula is satisfactory:

Cocaine hydrochlor	5 grains.
Zinc oleate	5 grains.
Soda bicarb	5 grains.
Amyli	q. s. ad ½ ounce.

To be used as a snuff every three or four hours.

I have only made a bare allusion to operative interference in the nose, because it would not be within the scope of this paper to discuss at length all the obstructive conditions which predispose the individual to recurrent attacks of rhinitis. But I am convinced that when such attacks do regularly recur after exposure we will find some deformity or obstructive lesion, the correction of which will afford the patient the surest permanent relief.

TUBERCULOSIS OF THE TONSIL.

BY SEYMOUR OPPENHEIMER, M.D., NEW YORK CITY.

In the study of tuberculosis of the tonsils it becomes necessary to divide the disease into two classes—the primary and the secondary. The primary form of the disease is very rare, but few cases having been reported from time to time, and the authenticity of these cases admits of considerable doubt. Stoesch submitted twenty tonsils, removed at post-mortem, to minute microscopical examination, and found two presenting tubercular changes. That the tubercle bacilli are present in a considerable proportion of apparently normal tonsils, and especially in the hypertrophic form of tonsillitis, has been demonstrated by several continental pathologists and laryngologists, experimental inoculations being performed upon guinea-pigs and rabbits. The tonsils selected were removed from the ordinary class of patients seen in the throat clinic. Hypertrophy was present, but no evidence of either local or general tuberculosis could be detected.

Shenker and Kruchmann, in an extensive consideration of the pathology of the disease, established the causal relations between primary infection of the tonsillar tissues with the tubercle bacilli and tuberculosis of the lymph glands. Primary infection may occur from the use of unclean instruments (especially the laryngoscope, which is

very difficult to keep surgically clean), from inhalation of air containing tubercle bacilli, or from ingestion of tuberculous food.

In dispensary practice, where the number of patients treated within a limited space of time is very large, it is almost marvelous that more cases of tubercular infection are not produced. The examining instruments are not properly cleansed previous to their use with each patient, frequently being merely wiped off with a towel or napkin which has done service for probably ten or twenty other cases. No doubt the tubercle bacilli are frequently transmitted from one point to another in this way, but from the natural resistance of the parts infection does not take place. The dust in the majority of dwellings, especially those occupied by the poorer classes, contains a considerable number of bacilli, and as the subjects of the ordinary hyperplasia of the tonsil sleep and usually live with the mouth open, using the nose but seldom as the primary respiratory organ, it is very apparent why the bacilli should be found in the tonsillar crypts. With the exception of milk, the majority of foodstuffs ordinarily used are free from the contagium.

On examination of the tonsils suspected to be the seat of primary tuberculosis, we will not be able to discover anything peculiar from a diagnostic point of view. They may appear normal, or, as is usually the case, they are hypertrophied. If a small piece be removed for diagnostic purposes and subjected to staining with hematoxylin and eosin, the lymph cells will be colored bluish-red, while the tubercle bacilli will assume that peculiar shade known as eosin red.

Occasionally the diagnosis must be based on this staining method alone, but usually it is associated with giant cells and tubercles, more rarely with caseation. Primary tuberculosis, although rare, is probably present more frequently than we suspect, and possibly many cases of pulmonary tuberculosis receive their infection through the tonsils. When the tonsil is the seat of a tubercular process, distinctly localized in this gland, one of two results takes place: either the disease remains local, not affecting the patient in any way, and is only discovered after the removal of the tonsil for other causes, or pulmonary tuberculosis develops from infection through the lymphatic system. The treatment of this primary form is very simple, and if the disease is localized in the tonsil, it is absolutely curative by removing the tonsillar mass by whatever means suitable to the individual case. Tuberculosis of the tonsils secondary to the pulmonary form is of quite frequent occurrence. If we consider that, according to reliable general statistics, about every seventh human being dies from pulmonary tuberculosis, while post-mortem records of various large hospitals prove that certainly not less than eighteen per cent of all patients

dying from tuberculosis of the lungs have some pharyngeal or laryngeal complication, it will be seen that, broadly speaking, every thirty-fifth patient dying in the practise of the general practitioner is afflicted with the cruel disease under consideration.

Strassman finds the tonsil involved in thirteen out of twenty-one fatal cases. On examination of the fauces, the seat of tubercular changes, we find the tonsils hypertrophied with no distinctive lesions, or ulceration may be present over the tonsil, soft palate, and pharynx. The ulcers on the external surface of the tonsil are uneven or ovoid in shape, pale in color at their circumference, but with a red base, slightly granulating. The anemia of the surrounding mucous membrane is well marked. The ulceration is very superficial, extending laterally rather than deeply, the surface being covered with a dirty, yellowish gray secretion. The soft palate aud the uvula are usually thickened with a semisolid effusion peculiar to this disease and known as submucous infiltration, in contradistinction to deep infiltration, as seen in syphilitic disease. Frequently the tissues are thinned from atrophy and lack of nutrition, and the epithelium covering the tonsil is thinned in patches from submucous swelling, or from the pressure exerted by a distended crypt. The mucous membrane of the pharyngeal cavity and soft palate is markedly anemic, often strangely contrasting with the apparently normal complexion of the patient. This anemia shows itself in the form of either a general pallor of the soft palate and pharynx, or in what appears to be congestion, but which on closer inspection is seen to be infection of the capillary vessels, so marked that even the smallest branches on the intensely anemic mucous membrane can be distinguished. In the neighborhood of the ulcers are small elevations or tubercles, varying in color from a deep red to yellow. Schnitzler made the diagnosis of tuberculosis in one case, before there were signs of the disease in the lungs, by excising one of these small granulomata and finding tubercle bacilli present.

The local symptoms are principally pain and dysphagia. The pain is intense, but is usually confined to the diseased region. Frequently the suffering is so intense that it is impossible for the patient to swallow without the use of an anodyne, and in this connection it is interesting to note that liquids are generally more poorly borne than solids or semisolids. The pain is especially severe if the posterior pharyngeal wall and larynx are involved. The extreme dysphagia will often necessitate the use of nutrient enemata, especially towards the fatal termination of the disease. The voice is not, as a rule, impaired unless the larynx is involved, but if the disease is far advanced, and especially if the tonsils are hypertrophied or ulcerated, the voice is changed in quality and its use is extremely painful. The mere swal-

lowing of the saliva even causes excruciating pain, and the patient is often desirous of starvation to avoid the agony attendant upon swallowing. Taste and smell may both be impaired, or even abolished, and the breath has a peculiar, offensive odor, which is more or less characteristic of the disease in this locality.

The diagnosis can usually be readily made, especially if there are marked pulmonary changes. The characteristic ulcers in the tonsils and soft palate, the intense pain, the emaciation, with hectic fever, are all readily recognized. A study of the temperature affords considerable evidence in favor of the disease, if the tonsillar lesions are not well marked. There are three diseases resembling to some extent tonsillar tuberculosis, namely, lupus, syphilis, and cancer. Lupus of the tonsils and pharynx is very rare, and the coexistence of a cutaneous lesion will help to clear up any doubt.

Cancer can usually be distinguished by the ulcerations, which are deep and angry looking; its course is very rapid, and the cachexia is generally present. In the early stages of carcinoma, before ulceration is present, recourse to the microscope, and the finding of the characteristic epithelial structure of carcinoma, readily makes the diagnosis.

As to syphilis, the diagnosis may occasionally present greater difficulties, the more so as we must bear in mind the possibility of a double infection being present in one and the same patient. The tonsillar lesion may be syphilitic while the pulmonary is tubercular. Resort to the therapeutic test with mercury and iodide of potassium in sufficient doses will assist in establishing the diagnosis. In the more ordinary cases, however, tubercular affections are distinguished by the pallor of the affected parts, the syphilitic lesions being more of a decidedly inflammatory character. The development of the tubercular ulcer is slow; that of the syphilitic more rapid. The general diagnostic features of syphilis, the absence of fever, with the history of a primary sore and the postcervical glandular enlargement, are not present in tubercular affections.

The characteristic pathological changes of tuberculosis of the tonsil are not different in any respect from those seen in other portions of the body, the locality of the disease alone giving rise to its definite local symptomatology. Before the ulcers form we must have the tubercle. These enlargements may occur as part of the morbid changes of other diseases—as syphilis, for example—but the tubercle of tuberculosis is characteristic of the affection, and is seen in no other disease. Briefly, it may be described as consisting of an enlargement of connective tissue, translucent, grayish in color, and about the size of a millet seed. The cellular elements are lymphoid and round, varying in size. The nuclei are generally small and homogeneous. Between

the cells is found fibrous tissue, not very vascular. The vessels are never newly formed, but have existed in the tonsillar tissue before the development of the tubercle, the latter growing around them. The blood-supply is at all times very deficient. The nodules may be isolated, or joined together in a mass from inflammatory changes, imperfect granulation tissue resulting. As the nodule grows older, caseation begins in the center, this degenerating process progressing until the nodule is a mass of granular débris.

The prognosis is, as a rule, very unfavorable. If the tonsil alone is affected, removal or prompt and radical medication offers some hope; but if ulceration is present, and the larynx and pharynx are involved, little can be done except such palliative measures as will prolong life and make the patient as comfortable as possible. As we see by the prognosis, treatment can at best be but palliative.

Lennox Browne outlines the treatment as follows: Counteract the general tuberculous tendencies, give as much functional rest to the diseased parts as possible, relieve the pain in swallowing, administer suitable nourishment, and attempt to heal the ulceration.

The constitutional treatment must always be enforced, as we cannot even hope for any success in the treatment unless attention to the general health is considered. Cod-liver oil, the hypophosphites, nutritive tonics, proper feeding, etc., should be carried out as if the case were pulmonary in character. Functional rest of the parts is extremely important, as every time the patient swallows or talks the movements of the muscles concerned in phonation or deglutition keep up the irritation. If the ulcerations are extensive, speaking must be prohibited, and food administered by the esophageal or rectal tube. Relief of the pain in swallowing will necessitate a careful consideration of the food to be used. The nutriment should be of a semisolid consistency, such as jelly, eggs (poached or soft-boiled), scraped meat juice, etc. This will give an idea of the character of the food required, but, of course, each case may require a special dietary of its own. Heat is usually very painful, while cold is grateful, so ice may be given in small pieces.

Of the drugs used to relieve the pain, cocaine is undoubtedly the best. I have lately been employing a pastil composed of morphine, cocaine, and antipyrin, which the patient allows to dissolve in the mouth.

The treatment of the ulcers is very unsatisfactory. Without enumerating the long list of drugs vaunted as being of value, but as yet in the hands of the majority of laryngologists only proving failures, we will confine ourselves to but one treatment, that of curetting the ulcers with the sharp spoon and then cauterizing with lactic acid.

We owe the introduction of this drug into the therapeutics of tonsillar tuberculosis to Krause, of Berlin. Moorhof, of Vienna, had extolled the merits of this drug in the treatment of tubercular disease of the joints. Krause utilized the suggestion for the larynx. In the majority of cases this has given the best results, cocaine being used preparatory to the application.

Of the internal remedies recommended at various times for the treatment of pulmonary tuberculosis, I now, in most cases, employ but one, namely, creosote in large doses. The use of this drug, combined with lactic acid applications, has yielded the best results in my hands.

In conclusion, quoting Lemon, "I can only recommend you, so long as we have nothing better, to adopt this method of treatment, and I hope your endeavors may be crowned with successful results."

CASE OF PUERPERAL SEPTICEMIA FOLLOWING ON PLACENTA PRAEVIA; TREATMENT BY ANTISTREPTOCOCCIC SERUM; DEATH.

BY I. FLETCHER HORNE, M.D., F.R.S.E., BARNSLEY, ENGLAND.

On October 9, 1898, at 7 P.M., I was called to see Mrs. K——, a multipara, aged twenty-seven years, on account of a severe uterine hemorrhage. According to the history, on September 4, while on a visit to a neighboring town, she had suffered from a considerable hemorrhage from the uterus, and subsequent to this had had one or two outbursts of moderate severity, but for a fortnight previous to my visit had been quite free.

About four o'clock in the morning on which I saw her, on rising to pass water, the hemorrhage suddenly recurred and she lost approximately two pints of blood. When I reached the house I found the patient much collapsed, with a feeble and rapid pulse. She was apparently about eight months pregnant. On examination the os was found to be dilated to about the size of half a crown, and on introducing the finger a condition of complete placenta prævia was discovered.

Chloroform having been administered by my friend, Dr. Sadler, dilated the os digitally, and having introduced my hand beyond the placental site, succeeded in rupturing the membranes and bringing down a leg, delivery being completed in the ordinary way. The placenta was firmly attached to the uterine wall, and had to be removed by the fingers. No further hemorrhage followed.

During the day the thermometer registered 101° F. and the pulse remained weak and rapid. The patient was put upon a mixture of

cinchona and salicylate of soda, and remained in much the same state until October 13. On this day, about 3 P.M., she had a severe rigor and the temperature ran up to 106° F., falling by 8 P.M. to 102.6° F. Fifteen grains of quinine was given, and the uterus was washed out with perchloride of mercury solution 1 to 2000. No débris came away with the washing. At 3 A.M. on the morning following the temperature was 103° F., at 7 A.M. 100.6° F., the patient remaining very prostrate. I again washed out the uterus, as before, and injected ten cubic centimeters of antistreptococcic serum, obtained from the Pasteur Institute, through Messrs. Burroughes, Wellcome & Co., of London. At 4 P.M the temperature was 102.6° F., and in the evening dropped to 100.4°. At 2 A.M. on the 15th it again rose to 105°, falling during the forenoon to 101.3°, at which time the injection was repeated. At 5.15 in the afternoon a second rigor occurred, and the temperature ran up to 105.2°, rising to 105.6° by 10 P.M. During this day somewhat profuse diarrhea came on.

On the next day (October 16) the patient was much collapsed, diarrhea was still troublesome, and the temperature remained at about 105°. A third injection, similar in quantity to the two previous ones, was given at 11 A.M., but the patient continued in much the same state, and died at 9 P.M., the thermometer just before death registering 110° F.

The case appeared to be a suitable one for testing the efficacy of the serum treatment. The reaction, if any, was little marked, and there was certainly no amelioration in the symptoms.

I am induced to publish this case because I think that, if statistics are to be of any value regarding the practice of a treatment which offers a chance of success in such a serious condition, it is important that the failures as well as the successes should be chronicled.

THE EARLY APPEARANCE OF PNEUMONIA AS A COMPLICATION OF TYPHOID FEVER; ITS RECOGNITION AND TREATMENT.

BY J. M. DA COSTA, M.D., PHILADELPHIA, PA.

The patient of whom I now speak is a varnisher twenty-nine years of age, whose only previous history is that four years ago he was in a hospital for eight months, being treated for melancholia. Three weeks ago he was taken ill with a cough, pain in chest and limbs, headache, vomiting, and nosebleed. His present condition, as we make out by examination, is as follows: Temperature 100°; no diarrhea. There are rose-colored spots on the abdomen and chest. There is impaired resonance over the left lung, both anteriorly and posteriorly. The expiratory sound is prolonged and harsh; breath

sounds can be heard in certain areas. On the right side there are no râles, though there were on admission; but the same harsh breathing is noticed as was detected over the left lung. The heart sounds are feeble, especially the first sound, which is markedly decreased. The Widal test gave a positive reaction.

There is no doubt about the man having typhoid fever. But that is not why I bring the case before you. I wished to bring it to your attention because of the lung complication. To understand this better it is necessary to go back to the condition of the patient when he was admitted. At that time the chest was full of sibilant and coarse râles, and there were all the signs of an acute catarrhal pneumonia. These signs have largely disappeared, showing recovery to be progressing in that respect.

But the progress of the case shows it to be one of typhoid fever. We have to deal, then, with a well marked case of typhoid fever with a very early lung complication. In some such cases there is not anything by which to say it is typhoid fever and not pneumonia in the beginning. Lung complications are common in typhoid fever, but it is not usual for them to come on early in the disease. As a rule they come on well along in the second week of the disease, or even in the third week. This is a type of cases in which the typhoid poison seems to fall on the lung, instead of the intestine, with its greatest severity. This man has had no diarrhea, and there is no tenderness over the abdomen now, nor is there any tympanites worth mentioning. In these instances there develops a congestion of the lungs and often catarrhal pneumonia. True pneumonia with consolidation of the lung does not happen as a rule. The history of these cases is that often nothing shows itself at first but the lung symptoms, the enteric symptoms developing later. This is so marked that the Germans make a separate disease of it, and refer to the condition as pneumotyphoid.

The point I wish to impress in this connection is that these symptoms come on early and mask the true cause of the trouble and the real disease. Pathology teaches us that the typhoid bacilli invade the lung instead of the intestine, as they are found in the air-cells in autopsies. This is really equivalent to typhoid fever having the lung as its site.

How are these cases marked clinically? The symptoms are diffuse and not limited to one lung as pneumonia generally is. Again, the râles are of unusual loudness. There is a case in the wards now whom I intended to bring before you, but the patient is too ill. In him the lung symptoms are even more marked than in the one under discussion. The great peculiarity of his case has been the extraordinary loudness of his râles, they being heard when approaching the

bed without making a search for them. Louis states that this is a means of recognizing that typhoid fever is present in these cases, and that if in doubt this is to be taken as indicating that the fever is present. The case just mentioned is certainly evidence in favor of this view. Further, we have this peculiarity marking these cases: You will find that there is not much change of sputum; it is not rusty, and there is nothing characteristic about its appearance. The tendency in this complication is to congestion with loud râles, and if the lungs are markedly involved, bronchopneumonia may be induced.

Still it is sometimes difficult to distinguish these from ordinary lung cases. Additional points irrespective of those mentioned are: First, the appearance of an eruption; this is not seen in ordinary lung diseases. Second, the aid of modern research enables us to place dependence on the Widal test; this is not absolute by any means, but in conjunction with other phenomena it is of some value.

It is important to treat these cases as typhoid fever instead of as lung trouble. Whatever treatment it is intended to adopt must be carried out irrespective of the lung trouble. In this case the antiseptic plan has been followed. This man is getting three grains of betanaphtol every four hours. In addition he gets carbonate of ammonium and whiskey, one-half ounce of the latter every third hour; this is for the fever and is also indicated for the weak heart. As a further point let me say that I like strychnine very much in these cases. It not only is good for the weak heart, but is a respiratory stimulant as well. In view of this we shall give this man one-fortieth of a grain every fourth hour.

The other case mentioned has been given strychnine and alcohol, and turpentine has also been used. In my experience turpentine is very valuable in lung complications. This is an old remedy, being highly recommended by Stokes, of Dublin. It acts as an alterative on the mucous membranes beyond its action on the typhoid bacilli. Owing to this it is among the most valuable remedies that we have where such congestion is present, expectoration becoming looser and the lung symptoms gradually disappearing. As a rule the cases of fever with lung complications require more stimulants than do simple cases. They are especially indicated in such cases as this, where there is extreme feebleness of the circulation.

You may ask as to the value I place on expectorants themselves. I reply that they are not of much value here. They are not as a rule beneficial in typhoid fever. Better use turpentine than carbonate of ammonium if sure of the case. It would have been better if the turpentine had been used in this case in the beginning, and it will be substituted for the carbonate of ammonium now.

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EDITORIAL ARTICLES.

THE SNOW.

The beautiful snow has been under a suspicion to which her ordinarily chaste appearance would not generally give rise. In all the large cities in which the sudden fall has been abundant and lasting an epidemic has prevailed which in the minds of many is associated with the snow which has covered the streets for a prolonged period of time. There would seem ample ground for this imputation. The mealy and mushy snow, surcharged with the horse excreta of three weeks' standing, would seem to possess all the qualifications of the first-class culture medium. The best that might be expected would be that the low temperature should hold its dangerous factors in abeyance. With the warmer weather must come conditions favorable to the development of all the pathogenic bacteria this putrid mass contains.

What should be done with the beautiful snow is a problem which certainly besets the wise men of the cities. To cart it away and deposit it in rivers and waste places after the manner inaugurated in New York by the late Colonel Waring is a method generally esteemed too expensive by those in control of municipalities. The blocking of the gutters which now follows the deposition of the snow at the edge of sidewalks might be avoided by piling the snow in the center of the street. But this again is quite impracticable when a car-line occupies the street, and those streets of largest traffic are almost invariably those in which car-lines are bound to pass. It would seem that much might be accomplished by the wise use of that valuable implement, the railroad scraper. The gutters at least might be kept clear and opportunities for the drainage of the surface water promoted. There has yet to be suggested some effective method of disinfecting the streets. There are numerous antiseptic agents which are as potent in strength

as they are cheap in price. Something of this kind might be made practical were the ingenuity of those who deal with these problems concentrated upon the matter.

The diseases the filthy condition of our streets provoke may be beneficent arrangements of Providence for bringing certain matters of public sanitation within range of municipal conception. The cholera, the plague, and epidemics of smallpox have only ceased to be by impressing in this way the public imagination. Once the dangerous factors inherent in the problem come to be realized, some method of dealing with the snow will undoubtedly be reached speedily.

EDITORIAL NOTES.

The Rat and the Plague.

The relation subsisting between man and the lower animals has recently been added to by the part assigned the mosquito in the etiology of malaria. Now comes Dr. P. L. Simond, and in an elaborate article on the plague in the *Annales de l'Institute Pasteur* accuses the rat of being one of the chief agents in disseminating the disease. The rat is not the only agent, but is assisted by the flea. The virus is transported by rat and man, and its transmission from one to the other is by the flea. The rat is such a ubiquitous animal and travels so extensively that as a propagator of maladies he may be highly dangerous. It has been said that advancing civilization is everywhere signalized by the presence of Scotchmen and rats, so that it is doubly serious to find this constant companion of man charged with malicious intent.

The Late Dr. J. B. Hamilton.

The death of the late Dr. J. B. Hamilton, who for some years occupied the position of editor of the *Journal of the American Medical Association*, will be received with feelings of regret by his many friends. As an editor he was a decided success, and his efforts to make the journal of the Association representative of the best professional tendencies of the day have been such that his successor will find it no easy matter to follow him.

ITEMS AND NOTES.

THE death of Sir William Jenner is announced as having taken place on December 12.

THE American Chemical Society held a meeting in New York on December 27 last.

A "WORLD'S TEMPERANCE CONGRESS" will be held some time during 1900 in London.

DR. VINCENZI, of Sassari, Italy, claims to have discovered the specific pertussis microbe.

DR. AND MRS. S. WEIR MITCHELL have sailed for Egypt, where they will spend several months.

ALL of the present medical societies of Toronto will be merged into one, thus establishing an academy of medicine.

SOME real estate men of Baltimore are considering the feasibility of erecting an office building in that city for physicians.

DR. HENRY CAMPBELL DOUGHTY, of Augusta, Ga., died in the twenty-sixth year of his age from tuberculosis contracted from inhaling the bacilli in his laboratory.

SO far as the Marine Hospital Service investigation and experimentation goes the use of Sanarelli's serum as a curative agent in yellow fever is by no means successful.

MRS. AUGUSTUS D. JULLIARD has given $32,000 for another floating hospital for New York. Last summer 61,000 mothers and children were given an outing by the St. John's Guild.

DR. JOHN GUITERAS, Professor of Pathology in the University of Pennsylvania, will resign at the end of the present year to accept the chair of the Practise of Medicine at the University of Havana.

LIEUT.-COL. R. M. O'REILLY, chief surgeon, Havana, Cuba, has recently been ordered to proceed to Jamaica, with the view of gathering information concerning military sanitary methods in that island.

PROFESSOR TRACUKEL tells of a slightly built virgin, aged thirty, whose right breast was fourteen and the left one seventeen inches in diameter, while the greatest circumference of either was forty-five inches.

THE resolution to appropriate $60,000 for a hospital for infectious diseases for Baltimore has passed both branches of the City Council and awaits the approval of the proper committee and the Mayor's signature.

A PROTESTANT clergyman near the Rhine has started a mud cure. He makes his patients wallow and sleep in the loamy clay and then walk about stark naked. It is needless to say that he has a large number of followers.

MR. ALFRED L. JONES, of Liverpool, who is the senior partner of an important firm trading with the West Coast of Africa, has offered the sum of $1750 a year to establish and maintain a laboratory in that city for the study of tropical diseases.

A STATUE of Charcot has been unveiled at the Salpêtrière Hospital in Paris, by M. Leygues, Minister of Education. Charcot is represented in the attitude of lecturing and in a professor's robes, his right hand resting on the temples of a hypnotized patient.

THE Madras Government has directed that experiments with the plague virus being conducted at the Medical College, or by the health officer of the municipality, or elsewhere, are to be stopped, and all cultures carefully destroyed.

THE Chicago Board of Health uses a cheap and efficient mode of disinfection by spraying on sheets a forty-per-cent solution of formaldehyde (formalin) and displaying them in closed rooms, cars, and apartments that need disinfection.

M. KRANTZ, the French Minister of Public Works, has given orders that henceforward there shall be placed in all trains and in the railway stations any necessary medical appliances and medicaments to be used in case of accident.

A MAN who paid a Vienna specialist 147 marks ($36) for curing him of tapeworm sued the doctor for a return of 84 marks ($21), on the plea that the worm was only a short one. The doctor said he did not remove tapeworms at so much per yard; but finally returned 10 marks ($2).

A QUACK doctor in Dusseldorf, Germany, found guilty of selling nostrums for all kinds of disease and of advertising "cure-alls" and similar impositions, has been sentenced to four years' imprisonment, to pay a fine of $710, and to a suspension of his rights of citizenship for five years.

The International Medical Congress will open in Paris August 2, 1900, and will close August 9. The entrance fee is $5. The Congress is divided into five sections. Two general meetings will be held, one on the opening day and one on the closing day. French is the official language, but English and German may be used.

The *Denver News* says that an examination was lately made of some electric belts sold by a street fakir at Ottawa. It was found that beneath a strip of gauze was a layer of dry mustard. When the wearer perspired a little the mustard was moistened, and set up a burning sensation, and the deluded victim believed a current of electricity was passing through him.

An almost unprecedented fatality, in connection with dental operation, is reported from Australia. A young lady, immediately after the extraction of a tooth, was attacked with violent cough and dyspnea which persisted, in spite of all remedies, until her death, which occurred a couple of weeks later. On post-mortem examination a tooth was found in the bronchus, which had caused gangrene of the lung.

Lord Iveagh (Edward Cecil Guinness) has presented the Jenner Institute with the sum of $250,000 in aid of scientific research in bacteriology and other forms of biology. The Jenner Institute includes most of the leaders in medicine and its allied sciences in Great Britain. Lord Iveagh also proposes to expend £250,000 upon the improvement of the unsanitary Bull Alley area, in the heart of Dublin.

At the Maternite of Marseilles the mortality amongst infants born before term has diminished considerably since 1896. In that year there were thirty-six deaths, while in 1897 there were six deaths only. This notable decrease seems to be due to a judicious employment of artificial serum in enemas at the daily dose of three ounces, or an ounce three times a day. Subcutaneous injections are rarely employed.

It would appear from an edict recently issued in St. Petersburg that the women students of medicine will hereafter be required to wear a distinctive dress. When they assembled at the beginning of the autumn session they found a notice conspicuously posted in the class-rooms not only prescribing the color and cut of the dress, but also enjoining the purchase of the material at a particular establishment and the making of the garment at a specified place. This edict appears to have issued from the police instead of from the Education Office.

HAROLD FREDERIC, the author who recently died in London at the hands of the Christian scientists, held the medical profession in very low esteem. The following paragraph is from his last novel, "Gloria Mundi:" "He drifted into an attack upon doctors as a class. He denounced them, root and branch, as impostors and parasites who darkened and embittered human life by fostering all the mean cowardices of small-brained people in order that they might secure a dishonest livelihood by pretending to dispel the horrors their own low tricks had conjured up."

THE card of two osteopaths practising in Baltimore says that osteopathy is based upon the proposition that man's body is a machine, and that pain and disease is simply the creaking and abnormal product of the running of the disordered mechanisms of the body, needing a machinist to fix and adjust them just as he would any other machine. With this done, the creaking will cease, the normal smooth running will be resumed, and the pain and disease are gone. The hands are the only tools required—no instruments, no knife, no drugs, no faith needed. On the other side of the card are the names of these two machinists.

As is well known (says the *Medical Press and Circular*), Napoleon Bonaparte died of carcinoma of the stomach at the age of fifty-two, his father having died at the age of thirty-eight, of the same disease. When Napoleon was born his mother was very young—between sixteen and twenty. In commenting upon these facts Mr. Hutchinson, in a new number of his "Archives," states that cancer is more common in the children of aged parents than of young ones, and suggests that the outbreak of cancer in Napoleon was probably due to inheritance, coupled with the depressing and annoying conditions under which his last years were passed.

THE Surgeon-General of the United States army has compiled the medical statistics of the American-Spanish war as follows: From May to September, inclusive, and representing an army of 167,168 men, there were reported in full 1715 deaths. Of this number, 640 were due to typhoid fever, 97 to malarial fevers, and 363 to diarrhea and dysentery. The death-rates of May and June—0.46 and 0.70—were not in excess of those of the army in peace times; in July the rate reached 2.15 for the month, or 25.80 per 1000, which does not much exceed that of well-cared-for cities. But in August the rate became excessive—4.08 per month, or 48.96 per 1000 per year. In September the conditions improved and the death-rate fell to 2.45, or 29.40 per year. The records of the civil war show that a high death-rate in

August was generally continued for months after, and Dr. Sternberg ascribes the improvement noted in September to the stricter sanitary measures adopted.—*Scientific American.*

PUNCTUALITY in woman has been attained under hypnotic suggestion in a remarkable set of experiments lately reported (*Scientific American*) to the Society for Psychical Research. A young person of nineteen, who had never shown any capacity for calculation, and who was in good health at the time, though her nerves had been unstrung for a year before, was hypnotized and directed to do certain simple things at specified times, writing down the time when she thought she did them. The intervals suggested varied from a few hundred to over 20,000 minutes, and sometimes as many as six suggestions, starting at different hours, were working on her at once. The experiments read like the painful examples in the mental arithmetics. At four o'clock one day she was asked to do something in 10,080 minutes, beginning at ten the day before. In fifty-five experiments there were only two failures. On awakening the subject had no recollection of the suggestions made to her.

THE highest death-rate in France among soldiers is, according to the *British Medical Journal*, under twenty-three years of age; after this weeding mortality declines. In the various garrisons in France the lowest mortality, 3.18 per 1000, is at Lille; and the highest, 8.01, at Clermont; chiefly due, in 1895, to influenza, pulmonary diseases, and typhoid fever. In Algeria the death-rate is influenced essentially by typhoid fever. But these death-rates are nothing at all compared with 103.1 in Madagascar, 107.1 in the Soudan. The causes of death are stated as follows: Endemo-epidemics, at home 474, in the colonies 825.2; ordinary deaths, 432 and 68.5; violent deaths, 95 and 105.3. Typho-malarial diseases and resulting cachexias account for the great mortality in such places as Madagascar and the Soudan. In the home army it is declared that the heaviest mortality is during the period of instruction — that is, vast numbers of weedy French conscripts succumb in training; in the colonies it is the duration of stay which kills. The experiences of the French army, although vastly more costly, are not essentially different from our own in tropical service. But it is pretty certain that our men have better initial stamina, owing largely to more careful selection, and that at every stage they are better cared for, and live under far superior hygienic and sanitary conditions than the French soldiers.

THE six-days' bicycle contest of last week demonstrated, says the *Medical Record*, that some men may undergo severe physical and a

certain amount of mental strain without sustaining any appreciable immediate ill effects. One contestant declared at the finish that he was prepared to start on another journey on the following day, and physical examination, it is said, failed to find any reason to the contrary. The victor, after his two-thousand-mile ride, was found to be in comparatively good condition, and it is a matter of interest that during the week he partook of no meat, but lived entirely on liquids, cereals, fruits, and eggs. Professor Atwater, of Wesleyan College, made a study, to be incorportated in a report he intends soon to make, of the foods consumed in their relation to energy expended during the contest. According to the notes of his trainer, the following food was taken by the champion: Three pounds of rice, one pound of barley, four pounds of Scotch oats, four dozen pint bottles of prepared milk, one pound rice-pudding with raisins, four one-pound bottles of beef extract, six raw eggs (in milk and lime-water), ten quarts of milk, one-half gallon of lime-water, three pounds of grapes (on Saturday only), three dozen apples, one dozen oranges, one-half gallon of coffee. No stimulants were taken, and the total sleep during the race was nine and one-quarter hours.

The executions in Paris during recent years have, says the *Massachusetts Medical Journal*, revived the old question whether death instantaneously follows upon the severance of the head from the body. Dr. Cinel asserts that decapitation does not immediately affect the brain. He says that the blood which flows after decapitation comes from the large vessels of the neck, and there is hardly any call upon the circulation of the cranium. The brain remains intact, nourishing itself with the blood retained by the pressure of the air. When the blood remaining in the head at the moment of separation is exhausted, there commences a state, not of death, but of inertia, which lasts up to the moment when the organ, no longer fed, ceases to exist. Dr. Cinel estimates that the brain finds nourishment in the residuary blood for about an hour after decapitation. The period of inertia would last for about two hours, he thinks, and absolute death would not ensue till after the space of three hours altogether. If, he adds, a bodyless head indicates by no movement the horrors of its situation, it is because it is physically impossible that it should do so, all the nerves which serve for the transmission of orders from the brain to the trunk being severed. But there remain the nerves of hearing, of smell and sight, and he concludes that the guillotine does not cause instant death. If this be true, could any other form of death be more merciless?

NEW PUBLICATIONS.

URINALYSIS.

Dr. Purdy's handbook of urinalysis has gone through three editions in three years, a fact which attests the popularity and distinction in which the work is held by the profession. Since the last edition, however, the work has been entirely revised and the latest discoveries in urinary chemistry incorporated. This work has now been adopted as a text-book upon the subjects with which it treats in upwards of sixty medical colleges in the United States. A number of new illustrations have been added to the new edition, and the book has been thoroughly brought up to date in every respect. The popularity of this work will undoubtedly be unimpaired as long as it continues to deserve so well the approval of the profession.

Practical Urinalysis and Urinary Diagnosis. A Manual for the Use of Physicians, Surgeons, and Students. By Charles W. Purdy, M.D., LL.D., Queen's University, etc. Fourth Revised Edition. With Numerous Illustrations, Including Photoengravings and Colored Plates. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1898.

THE PHONENDOSCOPE.

The instrument which Professor Bianchi introduced at the International Medical Congress in Rome in 1894, known as the phonendoscope, has quickly won a place for itself among the needful instruments of clinical diagnosis. This little work is intended to outline the uses to which the phonendoscope can be put. For many purposes it can be used with more advantage than the stethoscope. The perusal of this work will aid the physician greatly in making himself an adept with this useful instrument.

Translation of Lectures Delivered by Aurelio Bianchi, M.D., Parma, Professor of Preparatory Clinical Medicine and of Pathology, on The Phonendoscope and Its Practical Application. With Thirty-seven Illustrations. With Translations of Special Articles by Felix Regnault, M.D., France, and M. Anastasiades, M.D., Greece. Translated by A. George Baker, A.M., M.D. Philadelphia, U. S. A.: George P. Pilling & Son, 1898.

A TEXT-BOOK OF PATHOLOGY.

This is a practical exposition of the pathological changes to which the tissues of the body are subject. The work does not contain methods of examination or modes of bacteriological technique, the space being devoted exclusively to descriptions of the pathological conditions and states. Syphilis is included among diseases of uncertain pathology. The work is conceived in a modern spirit, and seems to meet a want in medical text-books which is not completely filled by any other work.

A Text-book of Pathology. By Alfred Stengel, M.D., Instructor in Clinical Medicine in the University of Pennsylvania, etc. With 372 Illustrations. Philadelphia: W. B. Saunders, 1898.

THE MEDICAL RECORD VISITING LIST.

Among the visiting lists which appear for public favor at the present time must be mentioned this one, which has already gained for itself an enviable reputation. It is exceedingly convenient in size and shape, and will still continue to be a favorite of the physician.

The Medical Record Visiting List or Physicians' Diary for 1899. New Revised Edition. New York: William Wood & Company.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

New Methods of Treating Infected Wounds.

The Berlin correspondent of the *Medical Press and Circular* gives an account by Dr. Galin of a series of comparative experiences with new methods of treating infected wounds. The methods of treatment were that of Crédé, with his silver preparations, and that of Majewski, with a mercurial preparation (twenty-five per cent of yellow mercurial ointment). In using Crédé's method the author does not use Crédé's silver gauze, but only washing of the wounds with aktol, sprinkling with itrol powder, and tamponade with gauze impregnated with the same powder. The results obtained by Crédé's method were not very satisfactory. The dressings were more frequently soaked through than with ordinary methods, although the soakage through was not pus, but serum. Wounds cleaned more slowly. The granulations were less active; the inflammation at the edges of the wounds continued longer than with ordinary dressings. The temperature of the patient was not influenced by silver dressings. In general it might be said that with Crédé's dressings the disease was kept from spreading, but that actual healing was somewhat delayed. This was so with acute purulent inflammations that the author saw in great numbers in the Kief Military Hospital. In common cases, with free suppuration, he saw but little diminution of it, neither was the character of the pus altered. In his opinion Crédé's method only found a place where after large incisions and antiseptic treatment the disease still showed a disposition to spread. With Majewski's method in the treatment of suppuration the author never observed any but perfectly negative results. With this treatment wounds began to bleed after three to five days of the treatment, and the condition became worse in other ways also. He only saw a good effect in tuberculous inflammation of the glands, and even here it was feeble and inconsiderable.

In conclusion the author recommends Kocher's treatment as the best he has known. It consists in washing with sublimate solution (1 to 1000), and subsequent neutralization, with physiological saline solutions, and then tamponade with iodoform gauze. At the following dressings the wound is not again washed. In the case of septic, foul-smelling wounds, however, they are again washed with permanganate of potash.

A Case of Uterus Masculinus (Tubular Hermaphroditism) in the Male, with Sarcomatous Enlargement of an Undescended Testicle.

A. Primrose, in the October number of the *Journal of Anatomy and Physiology*, reports a case of this kind in an individual thirty-two years of age. An attempt was made to remove the growth, but failed, and death ensued in a few hours after operation. The post-mortem revealed the fact that the bladder and prostate were normal in every respect, save that the opening of the sinus pocularis was perhaps slightly anterior to the point where it usually opens on the floor of the prostatic urethra. The opening referred to was of the normal size and appearance; it was found, however, to communicate with a structure which lay between the rectum and the bladder. This, on further investigation, proved to be a well-formed vagina and uterus. The uterus (including the body and cervix) was 7 centimeters in length, and this was continuous with a vagina 4.6 centimeters long. The width of the cavity of the uterus at the fundus was 1.5 centimeters, and in the middle of the uterine body .6 centimeter, whilst the thickness of the uterine wall was .4 centimeter. The cervix measured 2 centimeters in length; its cavity was spindle-shaped, and measured in its center (its widest part) .75 centimeter, being 6 centimeters at the internal os and 5 centimeters at the external os in diameter. The vagina opened into the prostatic urethra at the point mentioned above by a slit-like aperture .3 centimeter long. The prostate measured 2.5 centimeters from base to apex, with a transverse diameter at the base of 3 centimeters, whilst it was 2 centimeters thick from before backwards.

The uterus was characteristic in shape and appearance; the cavity of the body expanded towards the fundus, and terminated on each side in a rudimentary Fallopian tube; each tube could be traced for the distance of about one centimeter, and the uterine mucosa was continued into it. The body of the uterus was definitely marked off from the cervix, the latter possessing a remarkably well-developed series of plicæ palmatæ. The vaginal wall was thin, and possessed a somewhat rugose condition of the lining mucous membrane. The vagina tunneled the lower portion of the prostate opening into the prostatic urethra.

The growth found on the undescended testicle proved to be sarcomatous.

Treatment of Urogenital Tuberculosis.

Goldberg, of Widungen (*Munch. Med. Wochensch.*), in a contribution to this subject, declares that the course to be pursued regarding

operative therapy is determined by the question as to whether there is a tuberculosis confined to one organ of the genito-urinary tract.

For the kidneys and the external genitals this question can, in most cases, be determined, but regarding other organs only in a few cases, as an isolated tuberculosis of the prostate, ureters, bladder, or seminal vesicles is a rarity. Radical operative therapy then comes in question only regarding the kidney, testicles, and external parts accessory to the testicles.

The local treatment of tuberculosis of the bladder can for this reason be only palliative. Goldberg regards irrigation, cauterization, and extirpation, or resection of the bladder, as contraindicated. He recommends very strongly, not only as a valuable aid in operable cases, but also for the inoperable cases, the internal dietetic and medicinal treatment. Besides creosote and guaiacol he has used ichthyol in liquid form in doses of one to three cubic centimeters daily in thirteen cases of tuberculosis of the genito-urinary tract. The effect of the latter was not confined alone to the general condition, but also to the local symptoms, hemorrhage, suppuration, strangury, and pain. The improvement was so constant, steadily progressive, and so affected all the symptoms of the disease, that he did not feel any doubt could be entertained as to the connection between the improvement and the ichthyol medication, in spite of the fact that there is a well known intermittence in the symptoms in such cases.

Modifications of the Blood in Syphilis, Brought About by Intravenous Injections of Mercury.

Lindstrom (*La Presse Médicale*, No. 42, 1898) gives the result of his observations in the clinic of the late Professor Stoukowenkoff, of Kief. Many patients were treated by the Baccelli method. The details of seven cases, selected from the most significant, are given.

In his concluding remarks Lindstrom states that the effect of the introduction of mercury on the composition of the blood is rapidly beneficial. This improvement, however, is not sustained as the number of injections is increased. Minute doses, too small to produce any appreciable therapeutic result, have nevertheless a beneficial effect in the composition of the blood: parallel increase of the red corpuscles and of the hemoglobin, with diminution of the white corpuscles, or retardation of their multiplication. These phenomena follow the first injection, and are clearly due to the small quantities of mercury introduced into the blood-stream, for when the treatment is stopped the composition of the blood gradually returns to its first condition.

If the doses are slowly increased, the improvement in the quality of the blood is accompanied by a rapid effect on the syphilides. Beyond doses of 140–150 milligrammes of the perchloride, however, slight toxic effects occur, viz., diminution of the red corpuscles and the oxyhemoglobin, with an increase of the white corpuscles.

If the injections be continued, the toxic effects become more marked, and a mercurial anemia may be produced, which may persist long after the injections are discontinued.

On the other hand, if fairly large quantities of weak mercurial solutions be used (10–11 cubic centimeters, containing 10–11 milligrammes for each dose), an immediate improvement both in the quality of the blood and in the specific eruption is observed.

With regard to benzoate of mercury, toxic effects commence when the dose has reached 77 milligrammes.

Traumatisms of the Urethra.

G. Frank Lydston, in the *Railway Surgeon* for December, 1898, says that all of the severe varieties of urethral trauma are likely to be followed by serious results. In general the results of urethral trauma are as follows: (1) Hemorrhage; (2) retention of urine; (3) urethritis; (4) cellulitis and gangrene; (5) extravasation of urine, causing (*a*) cellulitis, (*b*) gangrene, (*c*) peritonitis; (6) septicemia; (7) such remote results as (*a*) fistula, (*b*) stricture, (*c*) false passages from attempts to introduce instruments through the lacerated canal.

Hemorrhage is rarely fatal because of the lacerated quality of the wound, and because the same ecchymotic swelling that shuts off the urinary way also prevents escape of blood *per urethram* and via the vesical neck into the bladder.

Retention of urine is always a serious matter, but can always be relieved by surgical measures.

The danger of extravasation and simple contact of the urine with the injured surfaces largely depends upon the condition of the urine and the length of exposure of the tissues to its influence. Normal urine, with free escape, is in no wise injurious to the tissues. If septic, either primarily or from being pent up in the tissues for a time, it is exceedingly dangerous, not only locally, but generally.

Urethritis from urethral trauma is simple, easily cured, and demands no attention here.

Urinary antisepsis, local and per os, is indicated during the course of urethral injuries. Boric acid irrigations, with salol and oil of eucalyptus internally, accomplish the desired result better than anything known to the author. Severe hemorrhage demands perineal section, perineal and urethral packing, and drainage.

Treatment of Tetanus by Intracerebral Injections of Antitetanic Serum.

At the meeting of the Society of Surgery (Paris correspondence of *Lancet*), held on November 15, 1898, a discussion was opened upon the treatment of tetanus by intracerebral injections of antitetanic serum, a method of treatment which some two months ago seemed to promise such good results. Statistics brought forward by sundry surgeons, however, gave a most disappointing result. M. Francois Hue had treated a child, aged eleven years, who developed tetanus after a compound fracture of the forearm. Many injections were made, but the child died, although the treatment was commenced immediately on the onset of the tetanic symptoms. M. Quenu had employed the method of MM. Roux and Borrel in two cases without success, although in one case where the tetanic symptoms had only lasted two days the immediate results of the injections were good, but the patient succumbed from pneumonia on the third day. M. Lucas Championniere had tried the treatment in two cases and had had two deaths. In one case of chronic tetanus the patient had recovered after one injection, but it must be remembered that patients do recover from the chronic form of tetanus. One surgeon stated that out of seven cases he had seen four of the patients get well spontaneously. The results obtained by MM. Reclus, Chaput, Richelot, Hartmann, and Nelaton were all equally unsatisfactory. In all cases treated by them with antitetanic serum death supervened. M. Peyrot pointed out the difficulty of differentiating tetanus from cerebrospinal meningitis, and asked whether certain cases of tetanus reported as having been cured were not really cases of meningitis.

Amputation at the Knee-joint in Senile Gangrene of the Foot.

Stephen Smith, of New York, read a paper before the recent annual meeting of the New York State Medical Association (*Philadelphia Medical Journal*, Oct. 29, 1898), in which he stated that many surgeons had practised amputation above the knee-joint in senile gangrene, alleging as a reason that it was impossible to determine at what point the circulation had been obstructed, and that consequently one was more likely to obtain well-nourished flaps if the amputation were done at the knee or through the thigh. By the use of an anatomical chart he demonstrated the eight arterial branches in this region, and that if the incisions and flaps were suitably planned, this arterial supply need not be seriously interfered with. The method pursued by himself was as follows: A straight incision is made from

two inches above the upper border of the patella downward over the center of that bone to the tuberosity of the tibia. From the lower extremity of this perpendicular incision two curved incisions are made having their convexity downward and extending respectively in the direction of the external and internal borders of the limb. These two incisions having been united posteriorly by a straight incision across the upper border of the calf, the flaps are dissected up from the tibia and fibula, the patella is removed, and the knee-joint disarticulated. He reported a case of senile gangrene of the foot in an alcoholic subject, aged seventy-eight, in which the method was successfully applied.

MEDICINE.

The Bearing of Recent Scientific Advances on Medicine and Surgery.

Prof. Rudolf Virchow, in his lecture before the Charing Cross Medical School (*Medical Press and Circular*, October 5, 1898), said that the path along which biological investigation had marched with ever-widening strides during the present century was that led by Hunter, Darwin, and Huxley, and was the path of genetic investigation. In the course of his remarks Professor Virchow said that the greatest difficulty in the advance of biology has been the natural tendency of its disciples to set the search after the unity of life in the forefront of their inquiries. In a medical school where the teaching is almost exclusively concerned with human beings this sentence should be written large: "The organism is not an individual, but a social mechanism." The corollaries must also be stated: (1) That every living organism, like every organ and tissue, contains cells; (2) that the cells are composed of organic chemical substances, which are not themselves alive.

The progress of truth in these matters was much retarded by that portion of Schwann's cell theory which sought to establish the existence of free cell formation, which really implied the revival of the old doctrine of spontaneous generation.

We now know that the cells are the factors of the inherited properties, the sources of the germs of new tissues, and the motive power of vital action. It must not, however, be supposed that all the problems of heredity have thus been solved. Thus, for instance, a general explanation of theromorphism, or the appearance of variations recalling the lower animals, is still to be found. In Professor Virchow's opinion each case must be studied on its merits, and an endeavor made to discover whether it arose by atavism or by hereditary trans-

mission of an acquired condition. As to the occurrence of the latter mode of origin he expresses himself positive. Equally difficult is the question of hereditary diseases. This is now generally assumed to depend on the transmission of a predisposition which is present, though not recognizable, in the earliest cells, being derived from the paternal or maternal tissues. But the most elaborately constructed doctrines as to the hereditariness of a given disorder may break down before the discovery of an actual *causa viva*. A notable example of this is found in the case of leprosy, the transmission of which by inheritance was at one time so firmly believed in that thirty years ago a law was nearly passed in Norway forbidding the marriage of members of leprous families. Professor Virchow himself, however, found that a certain number of cases at any rate did not arise in this way, and his results were confirmed by the discovery of the leprosy bacillus by Armauer Hansen. In a moment the hereditary theory of the disease was overthrown, and the old view of its acquirement by contagion restored. Precisely the same had happened a few decades earlier with regard to favus and scabies.

Turning to the subject of parasitism, Professor Virchow pointed out how the progress of scientific observation had been retarded for centuries by the prevalence of the assumption made by Paracelsus that disease in general was to be regarded as a parasite. Pushed to its logical conclusion, this view would imply that each independent living part of the organism would act as a parasite relatively to the others.

The *élite* of the infectious diseases are, however, the work of the minutest kind of parasitic plants, bacteria, the scientific study of which may be said to date from Pasteur's immortal researches upon putrefaction and fermentation. The observation of microbes under exact experimental conditions and the chemical investigation of their products opened up the modern field of bacteriology, a science among the early triumphs of which were the discoveries of the bacilli of tubercle and Asiatic cholera by Robert Koch. In connection with this subject three important landmarks require comment. One is the necessity for distinguishing between the cause and the essential nature of infectious diseases, the latter of which is determined by the reaction of the tissues and organs to microbes. Secondly, there is the relation between the smaller parasites and the diseases determined by them; this may be summed up in the general word infection. But to assume that all infections result from the action of bacteria is to go beyond the domain of present knowledge, and probably to retard further progress. The third point is the question as to the mode of action of infection. It is only the larger parasites whose main effect is the devouring of parts of their hosts; the smaller act mainly by the secre-

tion of virulent poisons. The recognition of this latter fact has led to the brilliant work of Lister on the one hand and to the introduction of serum-therapeutics on the other.

In conclusion, Professor Virchow referred with pride to the influence of cellular pathology in modern treatment, entailing as it does the principle of destroying the focus of disease by early operation. The cells of the body were like bacteria, in that they secreted juices which influenced the rest of the organism, and hence extracts of organs had come into therapeutic use.

Medicinal Cure of Sterility.

Many a household is rendered unhappy by the absence of children. This is sometimes owing to the husband, and sometimes owing to the wife, but in many cases it is almost impossible to determine the real cause of the trouble. Here Jones, of Edinburgh (*Indian Medical Record*), counsels not to forget the sedative affinity of belladonna toward the female sexual organs, and gives an opinion that the drug is followed by more or less benefit in every disease to which these parts are liable; and in married women who, though apparently enjoying the best of health and never suffering from any irregularity of the sexual organs, are yet sterile, the exhibition of belladonna internally for some weeks is so frequently followed by pregnancy as to preclude considering the occurrence as a mere coincidence. Though advancing no theory in regard to the matter, Jones has noticed that during the exhibition of the drug the external genitals became more relaxed and the os and cervix more pliable and softened.

The Sleeping Sickness.

Recently Patrick Manson exhibited two negro boys before the class of the Charing Cross Hospital, who were affected with what is known as "sleeping sickness." The two boys were from the Congo, where this sickness prevails to a great extent. In the onset of this affection the individual, although in good health, is unaccountably smitten with a gradually increasing mental and bodily lethargy, which goes on deepening in intensity until he is bedridden. There is a characteristic expression of the face and body, a significant droop of the upper eyelid, indifference to all amusements and occupations, and a stolid, rather mournful expression of the countenance. The individual becomes morose and unsociable and ceases to take a share in conversation; nevertheless he will answer intelligently and to the point when addressed. The disease may run its course in two or three months, or it may last as many years. Nine months seems to be

about the average time, and the issue is inevitably a fatal one. Little is known of its pathology, with the exception that post-mortem examinations reveal the pineal body to be enormonsly enlarged. In regard to the etiology Dr. Manson said that little was known. Examinations of the blood show the presence of a parasite, namely, the filaria perstans.

In the opinion of Dr. Manson the germ of sleeping sickness operates primarily on the encephalon; that this germ is possibly filaria perstans; that the parasite in its wanderings either by entering the brain, or by interfering more or less directly with its nutrition, may gradually bring about a cessation of its function, ultimately leading to secondary neuromuscular malnutrition and symptoms of sleeping sickness. If it can be shown that filaria perstans is the cause of sleeping sickness, the next step will be to ascertain the history of this parasite outside the human body. This once known, it will become easy to indicate an efficient prophylaxis. Sleeping sickness so far has proved incurable.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Effect of Different Media on Microorganisms.

Professor Bitting (*American Microscopical Journal*) has found by making ten exposures each of air, water, and milk upon four different media (neutral agar-agar, neutral glycerin agar, neutral beef gelatin, and slightly acid wort gelatin), using some closed petri dishes all under like conditions, that agar-agar gave the most bacteria and wort gelatin the most molds. The average number of colonies of bacteria developed by ten tests of air was: On agar-agar, 86; glycerin, 73; beef gelatin, 64; wort gelatin, 41. Ten tests of water gave the following number of colonies: Agar-agar, 2370; glycerin agar, 2260; beef gelatin, 1470; wort gelatin, 480. Ten tests of milk gave the following number of colonies: Agar-agar, 7967; glycerin agar, 11,207; beef gelatin, 7416; wort gelatin, 1700. Agar-agar shows the highest number of colonies. The average number of molds from air was as follows: On agar-agar, 3; glycerin agar, 7; beef gelatin, 20; wort gelatin, 34. Ten tests of water gave: Agar-agar, 12; glycerin agar, 15; beef gelatin, 60; wort gelatin, 88. Ten tests of milk gave: On agar-agar, 2; glycerin agar, 7; beef gelatin, 12; wort gelatin, 47. Wort gelatin showed the highest number of colonies of molds. Hence, statements of the number of forms found are of little value unless the media are taken into consideration.

THERAPEUTICS.

Antistreptococcic Serum in the Treatment of Primary Venereal Sores and Their Complications.

James Moore, in an article in the *British Medical Journal* of November 26, 1898, says that whether the chancroid is an entity caused by the strepto-bacillus described by Ducrey, or an ordinary septic abrasion—the anatomical and physiological peculiarities of the genital organs accounting for the subsequent ulceration and complications—it certainly bears a very close relation to infection of a small wound by the streptococcus in any other region of the body. This analogy suggested to him that antistreptococcic serum might possibly have a curative effect on the chancroid, and prevent suppuration (or liquefaction) of the acute inflammatory bubo so often accompanying it.

After detailing a number of cases where the serum was used, the author draws the following conclusions:

1. While recognizing the great importance of early local antiseptic treatment of the chancroid, he believes that if five cubic centimeters of the serum is injected subcutaneously into each inguinal region in cases in which inflammatory bubo is likely to develop, it will prove a good prophylactic measure, and assist in healing the chancroid.

2. If inflammatory bubo has already developed, and the acute inflammatory symptoms have not been present more than forty-eight hours, ten cubic centimeters injected into the inguinal region corresponding to the inflamed gland will cause resolution in the majority of cases.

3. If there is evidence of pus formation the serum may possibly limit the extension of the suppuration, but in this class of cases the author's results have been anything but satisfactory.

4. The serum should always be injected into the area drained by the infected gland, preferably the right and left inguinal region. He has not seen good results by injecting it into remote areas.

5. In phagedenic ulceration complicating venereal sores this serum would appear not only to neutralize the toxins in the blood, but also to bring about a healthy condition of the ulcer.

Stypticin in Uterine Hemorrhage.

Stypticin is the hydrochloric carbonate obtained from the opium alkaloid narcotine. A single dose of 0.2 gramme may be given by

intramuscular injection in the gluteal region, or 0.05 gramme as a powder or in pill form by the mouth, four or five times daily. The experiments carried out in Gottschalk's clinic with this remedy have shown good results and verified the successes which Gottschalk reported to the Vienna Gynecological Congress in 1895. The remedy works with especial promptness in the so-called reflex (secondary) hemorrhages of the uterus. In six cases of threatened abortion, the abortion occurred in four cases very promptly after the use of stypticin. In cases of endometritis fungosa the diseased mucous membrane must first be removed, and if hemorrhage continues after its removal stypticin should be given. The results of its use are so gratifying that it may be used to good advantage in other suitable conditions. No injurious effects of any kind have been observed from its use.—*Therapeutische Wochenschrift.*

Balsam of Peru in Scabies.

M. Descouleurs, of the St. Lazare Hospital (*Medical Press and Circular*), has published a series of cases (300) of itch treated successfully by frictions with Peruvian balsam, according to the method recommended by Petters, Nothnagel, and Rossbach.

Peruvian balsam seems to act as a tonic on the acarus. Placed on a watch-glass and in contact with sulphurous vapors, these insects die only at the end of sixteen hours, while in flour of sulphur or the classical ointment they can live one hour or more. Descouleurs having placed le acara in contact with Peruvian balsam, found that two died after ten minutes, and the remainder after twenty. The mode of application is simplicity itself. It suffices to rub in the balsam gently over the surface of the body. No preliminary soap-bath is necessary. However, a bath is recommended the following morning more for cleanliness than from any therapeutic purpose. Generally one application is sufficient, but the remedy may be employed two or three times if necessary, as it causes no irritation of the skin. M. Descouleurs believes that the balsam should take the place of every other agent where the skin is unusually tender, and the seat of impetigo, ecthyma, eczema, and in cases of young children. It is also particularly useful in pregnant women, who cannot generally take baths. There exists no counter-indication to its employment, and it is particularly appreciated by the patients in private practice, not only on account of its simplicity, but also for its agreeable odor.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Etiology of Stuttering.

Mygind, of Copenhagen (*Archiv für Laryngol.*), since the establishment by the Danish Government in 1885 of a course for the treatment of stutterers, has served as the medical member of the national commission appointed to look after the interests of these defectives. During this period he has made a careful examination of two hundred cases of children and young people between six and twenty-five years of age.

The causes of stuttering the author divides into the customary classification of remote or disposing, and immediate. Under the disposing causes he gives consideration to (*a*) the influence of sex; (*b*) the influence of age; (*c*) heredity; (*d*) certain diseases of the nose, nasopharynx, and pharynx; (*e*) certain constitutional diseases; and (*f*) finally, a few other remote conditions having an etiologic influence. Under active causes he cites: (1) the so-called psychical infection (contagium morale); (2) the infectious diseases; (3) trauma; and (4) certain psychical influences.

It is an old and well known fact that a large percentage of stutterers are of the male sex. Gutzmann, in examining schoolchildren, found that seventy per cent of the stutterers were boys; among adult stutterers, that ninety per cent were males. Mygind's cases showed eighty-five per cent of males. The age at which the speech defect was first noticed was in most cases before the sixth year—that is, during the period that speech would naturally be acquired. He noticed, however, that stutterers learned to speak, as a rule, much later than children free from speech defect.

Heredity plays a not unimportant rôle. No less than 85 of the 200 cases—that is, forty-two per cent—had relatives who were at the time or had previously been stutterers. In fifteen cases there was mental disease among the pupils' relatives. Five of the pupils had idiotic relatives. Epilepsy was noted among the relatives of thirty-two pupils. Various other unclassified neuroses were present among the relatives of twenty-nine per cent of the pupils.

Mygind found, with others who have studied similar cases, that stutterers very frequently suffer from some pathological condition in the nose or pharynx. Adenoid vegetations were especially common, being observed in thirty-nine per cent. Psychical infection could be traced in thirteen per cent—that is, they became stutterers through

direct association with other stutterers. A few cases seemed to arise from other psychical causes, such as fright and the nervous disturbance naturally caused in a child during its first weeks at school.

In conclusion, the writer lays considerable stress upon the signs of nervous degeneracy to be noted among stutterers and their relatives, which he regards as a very potent etiological factor in the production of this speech defect.

Tuberculosis of the Nose.

Dr. Moll, of Arnheim (*Monatsschrift für Ohrenheilkunde*), reported before the last meeting of the Netherlands Society of Laryngologists two interesting cases of tuberculosis of the nose. The first, a woman thirty years of age, complained of nasal obstruction. The right naris was filled with a red, smooth tumor arising from the posterior part of the cartilaginous septum. At a corresponding point in the left nasal fossa there was a small ulceration. After removal of the tumor with a snare the septum was seen to be perforated. The perforation border was treated with phenol. Microscopical examination of the preparation showed a rich cellular stroma with many giant cells.

The second case was also a woman. Moll found the left nasal fossa obstructed by a large granular mass arising from the lower turbinate, which at first glance gave the impression of a carcinoma. Under narcosis the mass was removed with a sharp spoon and the galvano-cautery. The microscopic diagnosis established the tuberculous character of the specimen. The recovery was very rapid, but the writer had been recently informed by the patient's physician that she was again suffering from some trouble in the nose, probably tubercular. Usually such tuberculoma frequently recur.

In the discussion following this report Tervaert reported three cases of nasal tuberculosis, and Huysman also gave the history of a woman sixty years of age who had developed tuberculosis of the nose while acting as nurse to a case of pulmonary disease.

Nervous Disturbances Dependent on Adenoid Vegetations.

Declaire (*Internationales Centralblatt für Laryngologie*) has made a study of the accidents to which in certain cases the presence of adenoid vegetations may give rise. He found present in many cases a cough, stridulous laryngitis in twenty-seven out of ninety cases, asthma, headache in six out of ninety cases, incontinence of urine, and a tendency to cry out at night when sleeping. Extirpation of the adenoid vegetations generally effected a cure of these complications and invariably restored the patient to general good health.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Neural Dynamics.

In a paper in the *Journal of the American Medical Association* of November 19, 1898, Dr. W. J. Herdman proposes a theory to account for the generation of what we have come to know and speak of as "nerve force," its conduction in the neuron, and its transmission from neuron to neuron. A more complete and exact knowledge of neural dynamics is required, and it is worthy of note at the outset that in nervous phenomena we have to deal with matter and motion, "the same two elements which underlie all the phenomena of the physical universe."

The ingenious and interesting attempts hitherto made on the basis of mobile dendrites of cortical neurons are somewhat narrow and at best as yet but mere assumptions, and fail to explain the cause of such movements, the manner in which impressions are transmitted from neuron to neuron, etc. "We find the neurons discontinuous cell-elements best arranged for their effective work in chains, each link so related to its special associates as to, in some manner, influence them and not others." Though neither chemistry nor the microscope has yet distinguished for us any positive difference in the composition or structure of the protoplasm of neurons differing in function, yet it is quite conceivable that such a difference does exist, also that sensations of temperature, pain, hunger, etc., have a special terminal nerve structure capable of responding to certain conditions, just as is demonstrable of the organs of the ordinary six senses.

The organs of temperature sense probably respond to vibrations of enormous frequency, since "radiant energy, which in its slowest molecular vibrations we recognize by the temperature sense as heat, consists of vibrations in the ether of at least 107,000,000,000,000 per second."

"While we do not know positively the nature of the change which takes place in any one of the forms of sensory end-organ so far considered, when acted upon by its appropriate kind of motion, analogies in physics and mechanics teach us that the end-organ is simply a machine for transforming that special form of motion into another form of motion that we call nerve-motion. Whenever the energy set free in a peripheral sensory neuron gives rise to changes in an associated central neuron, that energy has taken the form of some sort of motion."

What form of motion will best account for the influence exerted

by one neuron upon another? The author's conception, suggested by the structure and arrangement of neurons, and one which appears to be justified by the facts as far as we know them, is that associated neurons bear the relationship to each other of charged electric condensers. A disturbance of potential in one cannot take place without causing a correlative change in the associated ones. It appears to the author that the change which the energy undergoes in effecting its passage from neuron to neuron is of the nature of magnetic induction resulting from a change of static tension. Chemic action, heat, pressure, or mechanic movement, none of them seem so well adapted to effect the definite and prompt reaction that follows the disturbance due to a stimulus as does energy in this form of static electric tension.

This theory is certainly interesting, and we should be glad to record at any time the proofs of its truth, if future investigations shall make that possible.

Sensory Nerve-endings in Voluntary Muscles.

Many of the histologists have of late been doing most interesting work in the investigation of the endings of the sensory nerves in the voluntary muscles. The muscle spindles have been the subject of much painstaking work, and it seems to be pretty well settled that these are sensory organs.

In *Brain*, A. Ruffini records some interesting observations upon his work with muscles of the cat, describing somewhat in detail the different forms of nerve-endings found, and summing up his results thus:

There are in the voluntary muscles nerve fibers of three kinds —motor, sensory, and vasomotor.

The motor nerve fibers end, as is well known, in the end-plates of Rouget and Kühne.

The sensorial nerve fibers possess three quite distinct end-organs in man and in all the higher vertebrata. These sensorial end-organs of muscle are: (1) the muscle spindles; (2) the tendon organs (or Golgi organs); and (3) Pacinian corpuscles.

The vasomotorial nerve fibers form reticular plexuses or true terminal plates (Mazzoni), or terminate simply on the capillary walls with a fine apical enlargement (Ruffini).

The function of the motor plates and vasomotorial endings has been known for years. Further physiological experimentation is now wanted to investigate the functional activities of the three sensorial organs—the spindles, the tendon organs, and the Pacinian corpuscles. In the author's opinion it is upon these three kinds of sense organ that physiology must turn its attention if it will solve the problem of the muscular sense.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Cholecystenterostomy with the Large Intestine by Means of the Murphy Button.

Cousins (*Boston Medical and Surgical Journal*, Nov. 3, 1898) reports an interesting case in which all the symptoms were referred to the right iliac region; the patient had had repeated attacks. Examination showed the abdomen distended and tympanitic, especially in the right iliac fossa, where there was also an area of marked dulness and decided tenderness. Later a distinct tumor was felt in the right side extending from a point about three inches above Poupart's ligament to a point midway between the umbilicus and the anterior superior spine of the ilium, and thence upward to the margin of the liver, between which there was a tympanitic area. Posteriorly the tumor extended to the lumbar region as far as the anterior margin of the quadratus lumborum muscle. At this time there was only slight elevation of temperature, but the pulse was running at 120 to 130, and a slight yellow discoloration of the ocular conjunctivæ was noticed. Upon appropriate treatment the patient improved rapidly, and a day was fixed for appendectomy. On the day before this was to be done, however, the abdominal symptoms returned, there was marked jaundice, and the temperature suddenly ran up to 104° F. Operation was resorted to at once. The abdomen was opened near the crest of the ilium, but no abscess of the appendix was found. Adhesions at this point were very extensive, and there was a great deal of exudate. The examining finger carried upward discovered the gall-bladder greatly distended by fluid. A second opening was then made in the region of the gall-bladder, and the latter was found to be firmly bound down by adhesions and perforated, some of its contents having escaped into the general peritoneal cavity. The apex of the gall-bladder was adherent to the hepatic flexure of the colon, and, at the point of contact with the intestine, gangrenous. Fourteen gall-stones varying in size from an acorn to a beechnut were evacuated. The edges of the gall-bladder were stitched with catgut to the upper angle of the incision, and a most careful toilet of the abdominal cavity made. On the third day following the operation a fecal fistula developed, but this closed in a short time. The patient made a rapid recovery, with a remaining biliary fistula.

On account of the annoyance caused by the constant escape of fluid from this opening, several months later a cholecystenterostomy was made by means of the Murphy button with the large intestine. The button came away on the fifteenth day. The patient made a good recovery, suffered no inconvenience from the flow of bile into the large intestine, and was at the time of the report perfectly well.

PEDIATRICS.

UNDER THE DIRECTION OF CHARLES G. JENNINGS, M.D.,

Professor of Practice of Medicine and Clinical Diseases of Children, Detroit College of Medicine.

Serum Diagnosis in Pediatrics.

After a short account of the diagnostic experiments of Gruben-Widal, which produced such favorable results in abdominal typhus, Pfaundler (*Deutsche Medicinische Wochenschrift*, No. 41, 1898) quotes his own experiments in similar cases of intestinal complications by systematic examination of the intestinal bacteria by serum tests, to find the cause of this disease. His researches may be attributed to an endeavor to establish the theory (as yet but little discussed) that in above mentioned cases an etiological meaning may be more readily ascribed to the agglutination of bacterial species taken from the serum of a patient. A succession of about seven hundred separate reactions furnished the following conclusions: (1) That the saprophytic bacterium coli of the healthy intestine does not react upon the serum; (2) that in certain cases of contagious colitis a specific agglutination of bacterium coli develops; (3) that the same reaction appears in many instances in which the bacterium coli does not result from primary intestinal lesions, although it may proceed from certain conditions caused thereby, as peritonitis or cystitis. Positive results of serum reaction have been obtained from intestinal bacteria other than bacterium coli; for this reason the positive result of examination of serum for streptococci is noteworthy. A second phenomenon is the formation of fiber; a third (though noticed in few cases only) is the entire freeing of bacterial bodies, caused by extreme attenuation of the blood-serum. This refers to those mesenteric forms in the stools. This freeing took the form of dependent drops, as in Dr. Pfeiffer's experiments on animals.

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ORIGINAL CONTRIBUTIONS.

THE HOT BATH IN SURGERY.*

BY THOMAS P. SATTERWHITE, M.D., LOUISVILLE, KENTUCKY.

I wish to direct attention to the hot bath in the treatment of crushed, lacerated, and contused wounds, and in severe burns and complications following such injuries.

I use hot water, after it has been sterilized by boiling, in the form of the bath, and often add antiseptics; the water is changed every three or four hours, according to the amount of suppuration or cleansing needed. This can be done without disturbing the part immersed.

When the tub is filled the limb floats in the water; at the same time it is immersed. When the water is drawn off the limb subsides until it reaches a gauze support attached to the inner side of the tub like a hammock, and then settles upon it. The spigot at the end of the tub is large, and, when the limb is well on its support, is opened to its full extent; the water is then agitated and the suction draws away all sediment. The tub is refilled by either pouring water into it or by the siphon method.

This water support to an inflamed and tender limb which needs redressing several times a day is a great boon to the poor sufferer. The injured portion is relieved of its weight, the water supports it uniformly and softly, and allays inflammation in an exceedingly satisfactory manner. By this method I have had the pleasure of seeing, in my own and other doctors' practice, several limbs saved that were apparently hopeless. There is free drainage constantly by this method, whereas other dressings, no matter how frequently changed, afford imperfect drainage and leave more or less secretion in contact with the wound for absorption.

* Read before the Louisville Clinical Society.

The parts in the bath are undergoing cleansing all the time, thereby lessening the probability of infection. It facilitates removal of necrotic tissue and revives injured tissue. I have seen structures live that apparently looked hopeless. It is the only painless way of removing clots and foreign substances together with the microorganisms.

The temperature of the water is kept, night and day, between 135° and 150° F., being gradually raised to this maximum, which is accomplished by a coal-oil stove. Hot water is antiseptic, and heat is said to increase the potency of antiseptic substances added to the water. Heat also acts as a hemostatic and is a stimulant; it helps to compensate for the loss of heat resulting from bleeding and traumatic shock.

In railroad and factory injuries, often the wound cannot be thoroughly cleansed; the hot-water bath changes this infected into a non-infected wound; the sterilization is effective and produces active cellular life. When there is a fracture complicating the injury, the surgeon should carefully adjust the parts and the water will act as splints; when pus needs liberating, incise, and if necessary curette.

In the Cincinnati Academy of Medicine, June, 1898, Dr. Horace Whiteacre, in speaking of the conservative treatment of severe injuries, and in all types of spreading inflammation, extolled submersion as a valuable aid in saving limbs and tissue. He said that hot water by direct solution takes up and carries away large quantities of toxic products which are sources of local and constitutional trouble. In submersion the diffusive process is into the water instead of the blood. Water alone is healing. Moisture prevents exsiccation of the secretions and relieves tension. He further states that heat to a surprising degree relieves and brings back to life tissues that otherwise would be hopelessly lost, and an antiseptic added to the bath—such as carbolic acid in a weak solution—would be absorbed into the lymphatics, and, the tissues being saturated with the solution, the growth of germs at their seat of development is to a great degree prevented; wounds clean up and tissues are saved that seemed already lost. These agents stimulate nutrition, the blood remains fluid, and the vessel walls normal in the distal portions of an injured or obstructed vessel; the cells live a long time without blood-supply; and the use of submersion is based upon the fact that we artificially maintain conditions of heat favorable to the life of the cell until anastomotic circulation can establish itself.

My first experience with this mode of treatment was fifteen years ago. A woman had her right hand caught in a mangle, and all of her hand passed between two large hot rollers. The surgeon who was summoned told the proprietor of the hotel that the hand must be amputated to save life. Neither he nor the woman would consent to the removal of the hand. She was transferred to the city hospital,

where she became a patient of mine. The hot-water bath was used, with the result that all the metacarpal bones and the entire thumb were saved. The hand was kept in the bath for about two weeks. I clipped off the phalanges as they exhibited evidences calling for removal, and to-day she is working in the same hotel at the same employment, and has quite a useful hand, with the thumb and metacarpal bones intact.

Permit me to report one of my recent cases, which illustrates the virtues of this treatment: In an accident a freight conductor on the Southern Railway received a compound fracture of the ulna and radius just above the wrist. The end of the ulna protruded nearly an inch; the end of the bone as well as the wound was filled with cinders; the hand was nearly at right angles with the arm. I cleansed the parts as thoroughly as possible and adjusted the bones with the use of chloroform in a perfectly satisfactory manner. In the course of time there was a general cellulitis of the entire forearm and hand; the elbow-joint also became involved, abscesses formed, and all of the cellular planes seemed implicated. I had to make openings in the arm at various places to allow the discharge of pus. The arm and hand had swollen to twice its normal size, and those who saw the case before the injured parts were immersed in hot water had little expectation of the man's life being saved, much less his arm. In less than three months he resumed his work with a reasonably good arm and hand.

Before closing I desire to give extracts from a few medical journals with regard to the hot-water treatment.

The May number of the *Medical Times* quotes a new and simple method of treatment, which was introduced in France, for the saving of injured limbs which are usually amputated. Dr. Reclus had recently described it before the French Congress of Surgeons. He advocates wrapping the limb in an antiseptic substance and hot water at the temperature of 140° to 144° F.

The *Northwestern Lancet* describes "Hebra's bath," which also illustrates the usefulness of hot water. In the hospital in Vienna is an establishment devoted to the treatment of affections by prolonged and continuous submersion of a part or the whole body in water. Here patients pass weeks, months, and even years continuously in the water, never leaving the tub except for the purpose of evacuating the bowels or bladder.

These patients seem quite as comfortable and as cheerful as those who pass their time in beds in the wards. The temperature of the water is regulated according to the sensation of the patient, the contents of the tub being changed three times a day, except in cases

where there is much discharge of pus or other matter, when the water is changed oftener. None of the organs of the body appear to suffer by long submersion in water, even the skin itself being but little affected by the maceration.

The diseases for which this method of treatment is adapted are those where there is considerable loss of the integument, as in exfoliating pemphigus, extensive bed-sores, gangrene, wounds involving great loss of skin, and burns of great extent where it is impossible for the victim to assume a position which does not cause agony from pressure. The relief of the bath under such circumstances is marked, and the treatment often saves life that must otherwise be lost from shock and suffering under other methods of management.

Besides the above conditions there are certain skin diseases which do well in the bath. The victims of that hopeless disease, pruritus, find relief in the bath from the tortures of the terrible itching, and many patients end their days in the water, where at least they find relief and comfort, even though a cure is impossible.

The value of hot water has been so clearly demonstrated that it is surprising that every hospital does not provide accommodations for treating patients by this method. Extensive burns alone are common enough to justify preparation for their management in this way, to say nothing of other troubles.

I trust with these brief remarks, and the knowledge that cleansing and drainage are the key-notes in surgery, that the valuable therapeutic action of hot water will be used more generally.

THE TREATMENT OF DIPHTHERIA.

BY H. J. MEYER, M.D.,

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The remarkable decrease in the mortality-rate in diphtheria during the past four or five years makes this subject one of more than passing interest. Whereas before the advent of the present acknowledged specific treatment forty or even fifty per cent expressed the mortality, the death-rate to-day is three to ten per cent; provided the patient is under full control and all modern therapeutic measures are possible of application. The isolating wards of our hospitals meet these conditions in an ideal manner.

The treatment, as we understand the disease at present, may be comprised under the heads of prophylactic, general, local, and specific.

Prophylaxis. — There is no infectious disease the prophylaxis of

which is so simple, and the conditions which must be met so thoroughly understood, as diphtheria. First, it demands early and complete isolation of diagnosed and suspected cases; secondly, we have a general disease with a local expression, the result of a specific microbe. Hence, if we can control or limit the habitat of that microbe we shall prevent the spread of the disease in the community. In order to accomplish this all expectoration, membrane, and exudate must be received in antiseptic solutions and finally disposed of in such a way as to prevent the liquid from evaporating, so that the spores may not at some future time find a pabulum suitable for their development, thus giving rise to the disease *de novo*. All handkerchiefs or cloths used by the patient should be burned. Clothing or bedding should be disinfected, preferably in a steam sterilizer or by means of formaldehyde gas. And now the question arises, Shall we immunize those who have the care of the sick or who have been otherwise exposed to infection? This has been discussed both *pro* and *con* by eminent authorities, and can by no means be considered settled at the present time. In my own limited experience during my term of service at the hospital it has seemed to me to be of doubtful utility on account of the apparently transient effect of immunizing doses of the antitoxin. Its rate of elimination would seem to be rapid. Possibly by using a sufficient dose—say 1000 units—and repeating this every three or four days, immunization of attendants could be attained. But the discomfort, expense, and questionable efficacy of this treatment have militated against its extensive adoption. Until more comprehensive statistics are available personal hygiene and local disinfecting solutions will retain the confidence of the general practitioner.

General.—With regard to general measures much may be done to influence the course of the disease and to increase the comfort of the patient. The diet should be entirely confined to fluids—beef juice, milk, broths, albumen water, barley water, and soups. A liberal supply of some of the above should be given at short intervals. The quantity will of course depend on the age of the patient, but the interval between feeding should never exceed two hours. Sometimes rectal feeding becomes imperative. In these cases some of the predigested liquid foods, combined with a small amount of whiskey, will prove of service. Among general measures may also be mentioned the drugs considered almost as specifics in the past — calomel, pink powder, perchloride of iron, etc. An initial large dose or repeated divided doses of the mild chloride is certainly of decided benefit and is an almost routine measure in hospital practice. The chloride of iron would seem to be of greater utility in the later stages of the dis-

ease than during the first few days. It acts both by counteracting the rapid destruction of the red blood-cells and by its tonic effect upon the vasomotor system, constricting and lending tone to the relaxed vessels, particularly in the inflammatory area.

An antipyretic other than the effect of the antitoxin on the temperature is seldom called for, provided the infection be a simple one—that is, in cases where there are no staphylococci or streptococci present. In cases of mixed infection, if the temperature is dangerously high, a cold sponge or cold pack will be grateful to the patient and have a happy effect in reducing the fever, allaying irritability, and acting as a tonic to the whole vascular and nervous systems. Stimulants (and I refer now to alcohol principally) are a mooted question. All varieties of opinion are expressed, varying from the heroic measures of a certain Chicago physician, who has recently reported 100 cases treated with whiskey and nothing else, to those who would interdict the use of alcohol in any form. When we consider the profound depression in even a mild form of this disease, we must admit that stimulants not only have a place but are secondary only to the specific treatment. The writer recalls several instances in which, this part of the treatment being omitted, sudden profound depression came on unexpectedly, and in one case resulted fatally. With many practitioners it has come to be routine to place the patient upon either strychnine or whiskey, or both, as the severity of the case seems to indicate, at the first visit.

Local Treatment.—This will comprise the removal of membrane and exudate by whatever method employed and the local application of such substances as are known to have an inhibitory or destructive effect on the Klebs-Loeffler bacillus. The general practice at Harper Hospital was to give a gargle, or in very young children an irrigation composed of :

℞ Listerine ..... 1 pint.
Peroxide hydrogen..... 1 pint.
Lime water..... 2-4-8 pints.

M. Sig.: Gargle or irrigation every one, two, or four hours *pro re nata.*

The above was followed by the application of Loeffler's solution to all accessible exudate. This latter was repeated every two or four hours. In simple pharyngeal cases an ice-collar applied without intermission completed the local treatment. If the larynx was involved, in addition to the ice-collar a tent was constructed over the head of the bed and a jet of steam (medicated, if thought advisable) was made to enter the canopy, keeping the air respired warm and constantly saturated with the medicated vapor.

Specific Treatment.—The results obtained since the introduction of

antitoxin would make it seem almost criminal negligence not to employ this remedy in well recognized cases. Still there are those who contend that it is a dangerous substance, and claim that they fear antitoxin more than the disease. But when we consider diphtheria in its graver aspects, the profound depression of a virulent toxemia with every indication pointing to a speedy fatal termination, the exhibition of a decided dose of antitoxin will cause the temperature to come down to normal in twelve to eighteen hours, the pulse will become regular, full, and strong, and the respiration—in fact every symptom—will improve. Whoever has seen one of these cases no longer hesitates to concede the value of the serum. Antitoxin should be given early. It would even be good practice in some instances to give the antitoxin first and make the culture and positive diagnosis afterwards, for in most cases our mental bias is confirmed by the bacteriological examination.

In order to counteract the cardiac depression that is often observed after the administration, a dose of whiskey should be given at the time the injection is made and at intervals for some time following. This statement may sound dogmatic, but numerous instances in which this attention to stimulation was neglected, and as a consequence alarming symptoms supervened, have influenced the writer to make the administration of a stimulant concomitant with the injection of the antitoxin. With regard to the amount of the serum to be given, this will necessarily depend on the age of the patient, the stage of the disease, and the urgency of the case. Take, for instance, a case of well marked pharyngeal diphtheria in a child eight years old. The initial dose should be at least 2000 units. In laryngeal cases even proportionately larger doses are required, for here every hour is important and the relief of the stenosis imperative. Here the question of intubation or tracheotomy will often confront us. Statistics are all in favor of intubation. However, the question will always be decided by the personal skill of the operator, for whereas no surgeon would hesitate to undertake a tracheotomy, still few have had the opportunity to perfect themselves in the technique of intubation.

In the last annual report of Harper Hospital we find that thirty-three cases of laryngeal diphtheria were treated by intubation. During the same time only one tracheotomy was performed. This was on a patient twelve years old—intubation having proven ineffectual, the tube not extending down far enough to relieve the stenosis. It has been urged that pneumonias, both frank and lobular, are a frequent complication directly dependent on intubation. Although this does frequently happen, yet it is probably less common than after tracheotomy. In intubation we have the upper air-passages performing

their normal functions, whereas in tracheotomy they are entirely cut off from the respiratory tract and we must depend on artificial means to render the air fit for entrance into the lungs. This latter consideration would seem to more than counterbalance the slight danger of dislodging pieces of membrane in the process of intubation, and these foreign bodies finding their way into the bronchi and there setting up an aspiration pneumonia. The treatment of the complications and sequelæ naturally does not fall within the limits of this paper.

POSTPONING OLD AGE.

BY WILLIAM KINNEAR.

Whether old age be desirable or not, men in past times have eagerly listened to all means of postponing it. The Rosicrucians were metaphysicians and mystics, and believed that by chemical modes the decay of the organs of the body might be retarded. Shall we, who have within the last year or two been startled by the wonderful discoveries of the Roentgen rays, smile with a certain scientific disdain at the dreams of the Rosicrucians? In these last days of the dying century we do not know what may be coming to amaze us next. Suspending even for a few years physical decay would prolong life. Sixty years ago the use of anesthetics for the purpose of performing a painless surgical operation would have made the physicians of the early part of this century burst into roars of derisive laughter. Modern doctors say—and no doubt truthfully—that Washington and the first Napoleon were both murdered professionally.

Many discoveries made within the last fifty years even, to go no further back, would have seemed to the old alchemists who dreamed of an elixir of life utterly incredible. We have become so accustomed to new things in electricity that we forget that there are many people now living who doubted if President Buchanan and Queen Victoria ever exchanged official compliments by the first Atlantic cable. Sneering incredulity blocks, or attempts to block, the pathway of all new discoveries. It is only the familiar which seems credible.

Retarding physical decay and thus producing a possible suspension of old age, in the present startling period of strange discoveries, is not so visionary as it may seem. All women and most men attempt to hide the ravages of years. To welcome old age and enjoy it is better philosophy. After many years, say five or six decades, life's machinery often fails us and begins to show the effects of hard usage. Perhaps a majority of people do not die; they kill themselves either by neglect or excesses of various kinds. Others get tired of life. To

do the same thing day after day for several scores of years becomes a bore. Why then seek to run counter to the order of Nature and prolong a tiresome state of existence?

In fact, as all know, old age is of two kinds. Natural old age and that brought on by excesses are radically different. And excesses may be mental as well as physical. Without good health and faculties trained by sobriety and temperance in all things, both of mind and body, long life would be an intolerable tedium. To die would indeed be great gain in such a case. The possibility of living two hundred years in average good health seems to many a wild sort of scientific dream. Every week, though, we read of people who have lived to be one hundred and one hundred and ten years old. Let us not be surprised at anything.

We cannot defy death, but we may, by searching, find secrets of Nature and apply them to the renewal of the organs whose decay is constantly going on in the body. Anatomical experiment and investigation show that the chief characteristics of old age are deposits of earthy matter of a gelatinous and fibrinous character in the human system. Carbonate and phosphate of lime, mixed with other salts of a calcareous nature, have been found to furnish the greater part of these earthy deposits. As observation shows, man begins in a gelatinous condition; he ends in an osseous or bony one—soft in infancy, hard in old age. By gradual change in the long space of years the ossification comes on; but after middle life is passed a more marked development of the ossific character takes place. Of course these earthy deposits, which affect all the physical organs, naturally interfere with their functions. Partial ossification of the heart produces the imperfect circulation of the blood which affects the aged. When the arteries are clogged with calcareous matter there is interference with the circulation upon which nutrition depends. Without nutrition there is no repair of the body. Hence in his work, "The Physiology of Common Life," G. H. Lewis states that "if the repair were always identical with the waste life would only then be terminated by accident, never by old age." Both Bichat and Baillie considered that the greater number of people past sixty suffer more or less from arterial ossification, which brings about obstructions in the proper and healthy circulation of the blood.

None of these things interfere with nutrition and circulation in early years. The reparation of the physical system, as every one ought to know, depends on this fine balance. In fact, the whole change is merely a slow, steady accumulation of calcareous deposits in the system. The physical organs cannot preserve the balance between waste and nutrition. This is what we call old age. Nutrition in the

earlier years of life is perfectly performed. Repairs are at once promptly attended to by the young blood. To repair the waste of the body, so that the exquisite equipoise called perfect health may be maintained, and the decay and blockage which advances with age may be kept at bay, is to prolong our years. If this secret be known, why not hundreds of years of life? Keep the means of repair of the system always in good working order, and you live, according to nature, in the highest, finest sense.

If all medicines could be administered in the form of hypodermic injections, and thus introduced directly into the blood, they would be far more efficacious than they usually are. Chemical action of the stomach often changes the character of drugs. Could the blood absorb them in a direct manner, what a difference would be noticed in the results. We will come to it in time, and then doctoring will be more scientific.

Great men in all ages—such, for instance, as Francis Bacon and Dr. Hufeland—have given much thought to their theories for prolonging life. Novelists like Lord Lytton have taken up the subject in "Zanoni" and "A Strange Story," and even such blood-and-broken-bones writers as Rider Haggard in "She" have not halted at the threshold. Bulwer Lytton hints at methods of renewing youth by the use of drugs and chemicals. Haggard's pillar of fire is a monstrous absurdity. *Fire in all forms destroys life, never restores it.* Wallace in his "Prince of India" introduces this same dream and speculation of a renewal of youth. And many scientific men have written books on the art of prolonging life, so that old age should come on gradually and the body last for a hundred, a hundred and fifty, or even two hundred years.

Of course, unless one was able to get about and retained good health, long life would be unendurable. As all depends on keeping the blood in a good condition, the blood-producing organ must first be attended to and kept in healthy order. Without eating and drinking there can be no blood. The stomach, then, is really the headquarters of all life. Some writers and thinkers who have paid much attention to the subject hold that after the age of about sixty most people should avoid foods which abound in earthy salts. Earthy deposits of this kind consist principally of phosphate and carbonate of lime.

A slow and steady accumulation of matter of a calcareous character all through the body changes the structure of the various organs and modifies their form and functions. If the true cause of gradual disintegration in the various organs of our bodies is that they are inadequately supplied with blood, the investigation of this blockage

should certainly be looked after. Old age is, according to Dr. C. T. B. Williams, F.R.S., "a process given to be viewed as almost entirely of a chemical nature, consisting in the concretion and accumulation of calcareous salts, phosphate and carbonate of lime."

The oxygen of the atmosphere is a most destructive element in many respects. Recent researches of a scientific character have shown that the origin of one of the sources of old age—namely, fibrinous and gelatinous matter—can be traced to the destructive action of atmospheric oxygen. Now, the relative proportions of oxygen and nitrogen in the air we constantly breathe are 22 of the former and 78 of the latter. Oxygen is the more active, aggressive element of the two, though of much smaller bulk. For every other element except fluorine oxygen has an affinity, thus forming oxides. In the chemical changes constantly taking place in our bodies oxygen plays the most important part by all odds. By oxidation, which is a constant waste or rust of life, the physical system is hourly destroyed and then again built up by the reparation of the food we live upon. Albumen and fibrin exist in the blood and are resolved into their component elements—carbon, hydrogen, nitrogen, oxygen, sulphur, and phosphorus. By oxidation the albumen is converted into fibrin, which nourishes the organs of our bodies. But in repairing their waste an excess of this substance accumulates in the blood-vessels, causing their induration, and thus gradually lessening their caliber. Gelatin is an oxide of fibrin, as fibrin is an oxide of albumen. Oxidation causes these substances in part to be decomposed, and afterwards eliminated through the kidneys. A constant struggle is daily going on in our bodies, when in the most perfect health, between accumulation and elimination. And these accumulations, becoming greater in old age than the power of elimination, produce the effects we term "feeling one's age."

In order to preserve and prolong life, how shall they be counteracted? Let us see. Seventy per cent of the human body is water—nearly three-fourths. Not a single tissue is there in which water is not found as an ingredient. Certain salts are held in solution by this water, portions of which—notwithstanding the large quantity eliminated by the secretions—become more or less deposits in the body. When these become excessive and resist the expulsion they then cause the stiffness and dryness of old age. Entire blockage of the functions of the body is then a mere matter of time, and the refuse matter deposited by the blood in its constant passage through the system stops the delicate and exquisite machinery which we call Life. This is death. It has been proved by analysis that human blood contains compounds of lime, magnesia, and iron. In the blood itself are thus

contained the earth salts. In early life they are thrown off. Age has not the power to do it.

Hence, as blood is produced by assimilation of the food we eat, to this food we must look for the earthy accumulations which in time block up the system and bring on old age. It is thus seen that in the necessary elements of nutrition lurk the enemies of life, for food contains salts of a calcareous character. Does it then follow that man, by careful selection of his daily food, may prolong his life? In a measure, yes. Bathing, pure air to live and sleep in, exercise, and other means of preserving health, must be attended to, of course; but what we put into our mouths to make our blood is the important matter either in retaining health or prolonging life. Almost everything we eat contains more or less of these elements for destroying life by means of calcareous salts deposited by the all-nourishing blood. Careful selection, however, may enable us to avoid the worst of them.

Paradoxical as it may sound, certain foods which we consume to preserve our lives help at the same time to hurry us to the inevitable gate of the cemetery. Earth salts abound in the cereals, and bread itself, though seemingly the most innocent of edibles, greatly assists in the deposition of calcareous matter in our bodies. Nitrogenous food abounds in this element; hence a diet made up of fruit principally is best for people advancing in years, for the reason that being deficient in nitrogen the ossific deposits so much to be dreaded are more likely to be suspended. Moderate eaters have in all cases a much better chance of long life than those addicted to excesses of the table. Blockages of the functions of the stomach are more usual to those who eat more than the stomach can utilize than to the light eaters.

Mr. De Lacy Evans, of London, who made many careful researches in these regions of science, comes to the conclusion that fruits, fish, and poultry and young mutton and veal contain less of the earthy salts than any other articles of food, and are therefore best for people entering the vale of years. Beef and old mutton usually are overcharged with salts and should be avoided. If one desires to prolong life, therefore, it seems that moderate eating and a diet containing a minimum amount of earthy particles is most suitable to retard old age by preserving the system from functional blockages. Excessive action of atmospheric oxygen must be counteracted. Ossific matter deposited in the body must be dissolved as far as practicable. To produce this desired effect distilled water and diluted phosphoric acid are perhaps the most efficacious and the least harmful. Their combined chemical action retards old age.

The powerful solvent properties of distilled water are well known. As carbonate of lime exists in nearly all drinking-water, the careful distillation eliminates this harmful element. As a beverage distilled water is rapidly absorbed into the blood; it keeps soluble those salts already in the blood and facilitates their excretion, thus preventing their undue deposit. The daily use of distilled water is, after middle life, one of the most important means of preventing secretions and the derangement of health. As to diluted phosphoric acid, it is one of the powerful influences known to science for shielding the human system from the inconveniences of old age. Daily use of it mixed with distilled water helps to retard the approach of senility. By its affinity for oxygen the fibrinous and gelatinous deposits previously alluded to are checked and their expulsion from the system hastened. Waste of the tissues is believed to be preventable also by the use of hypophosphites.

Hence, to sum up the most rational modes of keeping physical decay or deterioration at bay, and thus retarding the approach of old age, we should avoid all foods rich in the earth's salts, use much fruit, especially juicy, uncooked apples, and take daily two or three tumblerfuls of distilled water with about ten or fifteen drops of diluted phosphoric acid in each glassful.

Inventive geniuses, if they gave as much attention to means of prolonging life as they do to military modes of exterminating it, might do much more good in the world. The curious indifference that most people show for death is a strange thing to some of us. Are they so sure of that other life beyond the Black Curtain?

Science, having undermined faith in the unseen, ought as a recompense to do all things possible to extend and render this present life happy.

SPERMATOCELE TREATED WITH NORMAL LIQUID ERGOT.

BY J. V. BECELAERE, M.D., DETROIT, MICH.

Patient, forty-five years of age, had been several times relieved by palliative measures, and when first seen presented a condition of the scrotum very similar to that characterizing hydrocele.

History.—In former years he was in the habit of riding horseback, and ascribed the origin of his complaint to concussion of the scrotum and contents on the saddle-pommel. The trouble began with a small cystic formation at the head of the right epididymis, which, gradually enlarging, finally distended all of the tunica vaginalis on the same side. This condition had existed for ten years or more, with occasional relief by tapping, when the patient came under my care.

Symptoms.—Dull, heavy, dragging pain in lumbar region, scrotum greatly distended with fluid—symptoms characteristic of hydrocele; tumor resilient, translucent, and faintly fluctuating. Distention neither disappears nor diminishes on lying down, which precludes the possibility of a fistulous connection with peritoneal cavity. Left testicle somewhat small and softened, otherwise healthy.

Patient in good physical condition, with no history of malignant growth in family—a condition which, I think, should be fully ascertained before interfering, since about or after middle age hydrocele is not infrequently met as an early complication or a disguising feature of testicular carcino-sarcoma, in which case I should refrain from tapping, and advise more conservative treatment.

From the early history, the run of the case, and general condition of patient, I was enabled to exclude malignant growth, while the first local determination (cyst in the head of epididymis) allowed me to suspect spermatocele, a diagnosis soon confirmed by the microscope.

After securing usual antiseptic precautions, with the patient in bed, a small-caliber hydrocele trocar was pushed through the more than usually resisting tunica vaginalis, giving escape to at least eight ounces of a fluid not unlike barley water. Patient, being rather nervous, here made a movement which allowed the cannula to leave the sac, and thus precluded my using the intended injection. About five weeks later he reported ready for another attempt, which proved successful, in so far as I was enabled, after withdrawing about eight ounces of an opalescent fluid, to inject within the sac sixty minims of normal liquid ergot.

Results.—The expected inflammatory phenomena were decidedly mild as compared with those following iodine injections; pain less marked, less edema of scrotum, epididymitis moderate, and subsiding rapidly. Patient was about the room on the fourth day, wore a suspensory bandage for a couple of weeks, and soon left it off altogether. Three months later, when seen again, fluid had not reappeared and all induration was gone, leaving testicle sound and healthy as before the trouble, with the exception of a slightly atrophic condition.

Surgeon-General Sternberg made a statement before the house committee on military affairs that the medical branch of the army had at no time been adequate, even in time of peace. He urged that the most essential need of the medical corps was to have experienced men quickly available for emergency. Referring to the Santiago campaign, General Sternberg said that the military situation was responsible for what occurred.

THE MEDICAL AGE.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

IDIOGLOSSIA.

Among the rarer disorders of speech, of which during the past year several cases have been reported, is one in which the speech becomes so peculiar as to give the impression that the speaker uses a language of his own. Dr. Guthrie, of London, has recently reported in the *Clinical Journal* a case of this kind in which he was enabled to analyze somewhat successfully the nature of the defect. The name "idioglossia" has been given to this disorder, and the defect seems generally to be conceded to be in the nature of an exaggeration of certain defective modes of speech which are of common occurrence in minor degrees. The term "lalling" has been suggested ("lallen," to speak as a child) for this trouble, but idioglossia is probably the better name.

The condition is characterized sometimes by a tendency to mispronounce vowel sounds, but more often the marked tendency is to substitute one consonant for another. "R" is often represented by "y" or "w." "Rabbit" becomes "yabbit" or "wabbit." Sometimes "r" has an "l" sound. Defects of speech similar to these of idioglossia often appear to spring up and become universal and then gradually die out. The extraordinary inaptitude for the proper use of the aspirate among certain sections of the English people is an example of this. These common defects of speech are but minor instances of a condition which is demonstrated in major degree in typical and pronounced cases of idioglossia. In many cases the language used is so unlike anything known as to require the greatest ingenuity to comprehend it.

Idioglossia not being pathological in origin, does not, as some have imagined, appear in its nature either as a spontaneously invented language, nor as an example of atavism, nor as a sport in language.

It is not to be confounded with baby language, nor with the language of imbeciles, although it bears a superficial resemblance to them. It is not evidence of weakened intellect. It is an exaggerated form of minor and extremely common defects in speech. It does not depend upon malformation or imperfection of the motor organs of speech, but probably is chiefly due to a congenital deficiency of audition.

The fact that speech is learned by imitation, and especially by the imitation of sounds heard, makes the auditory memory one of the prime instruments in the evolution of the speech function. Children learn to speak first by imitation. They imitate sounds which they hear, and movements of the lips, eyes, and mouth which they see. The imitative faculty is not possessed by all in the same degree, nor is the audition equally acute in all. When the imitative faculty is deficient, it must be compensated for by a greater amount of mental concentration, and in many cases of idioglossia it will be found that the language defects of the patient can be corrected by an exercise of the visual attention.

The moral to be drawn from these cases of idioglossia is one which will emphasize anew the dependence of speech function on auditory memory, and one that will indicate the extreme danger of tampering with the audition of children, especially in the use of baby language. Habit is always one of the deepest laws of Nature, and a bad habit of word-memory is not less demoralizing to its possessor than many other fundamental forms of perverted sensation.

EDITORIAL NOTES.

Luccheni's End.

The end of Luccheni, the murderer of the late Empress of Austria, is just what might have been expected. His vanity and egotism vanish as soon as he is deprived of the gratification of displaying himself. He becomes the hysterico-epileptoid imbecile of the criminal anthropotomist. The Italian journals describe him as wan, dejected, and prostrate, and deploring his crime. Vanity seems to be the impelling motive in the acts of anarchists, and wherever this sentiment is pathologically developed the subject of it should be carefully watched. The most dangerous cranks can be recognized by their supreme *amour propre.*

Vital Statistics in Fiction.

A contemporary calls attention to the strange ratio between the living and dead which prevails among leading novelists. In Marion

Crawford's stories there are recorded ninety-one deaths, seven marriages, but only two obstetrical incidents. In "The Prisoner of Zenda" there are about five deaths to a chapter, with not a single birth. While the marriages of fiction are usually sterile, obstetrical events sometimes form important elements in the dénouement. A recent story of Mr. Grant Allen will occur to the minds of many readers, in which a normal physiological event of this order is made to play a pseudo-miraculous part.

Shall the Surgeon Intervene or Interfere?

The editor of the *Richmond Journal of Practice* thinks the term "surgical interference" should yield to that of "surgical intervention." The precise shades of difference between intervene and interfere will furnish ample occupation for the schoolmen and others who delight in verbal subtleties. Interfere is not a bad word to express the surgeon's attitude. The French words *entre* and *ferir*, from which it is derived, would make interference a "strike between," rather than a "come between," which intervention should but does not of necessity mean. To strike between a disease and its victim is rather a fine proceeding on the part of the surgeon.

The Plague and Hindu Prejudice.

The authorities in India seem at last to have made some progress in the matter of the plague, and to have really made an impression on the Hindu mind. At a meeting held in Bombay, at which 5000 "Bohras" were assembled, their high priest, who was present, made a speech, in which he declared that there was nothing contrary to religion in Professor Haffkine's system of inoculation treatment. He then and there consented to be inoculated, and as a further guarantee of his faith allowed his son to be immunized. A large proportion of the Hindus followed his example. This seems to be a triumph in every way for sanitary progress, especially as it shows that Hindu prejudices are not insuperable, provided they be judiciously conciliated.

ITEMS AND NOTES.

THERE exist at present at New Lexington, Ohio, two fully developed cases of leprosy.

A NEW monthly medical journal has been started in Minneapolis, under the name of the *Medical Dial.*

THE population of France has increased 108,088 in 1897, over that of 1896. The birth-rate, however, shows no increase.

THE trustees of Columbia University have voted to establish a scholarship in memory of the late Dr. Joseph O'Dwyer.

FOREIGNERS wishing to practice in France must possess not only the French M.D. degree, but that of a French Baccalaureate.

AN edition of twenty thousand copies of the new British Pharmacopœia has been exhausted, and a second edition is on the press.

THE reason why the streets of Chicago are in such a filthy condition is that when the annual appropriation bill comes up the aldermen quarrel among themselves, thus holding up the bill.

THE University of Montpellier has just decided to admit women to the examinations for the Doctorate in Pharmacy, which is in future to take the place, in France, of the present title of "first-class pharmacien."

DR. MENDELSOHN, of Germany, has made some interesting experiments upon the physics of taste. He states that this sense is strongest between 10° and 20° C., and is weakest at freezing and temperatures around 50° C.

PROFESSOR ROENTGEN lately had a call to the Leipzig University, to succeed Professor Wiedemann, who has retired at the age of seventy-two. After some deliberation he declined it, and for the present remains at Würzburg.

THE State of Vermont has appropriated $5000 towards the creation of a laboratory plant connected with the University of Vermont at Burlington. It has also appropriated an annual sum of $8,000 for the maintenance of the laboratory.

PROFESSOR BEHRING, together with a Dr. Ruppel, has applied for a German patent for a tuberculosis serum. His claim is: "A method for producing a highly poisonous and immunifying substance from tubercle bacilli or from cultures of tubercle bacilli."

According to an exchange, statistics recently published show that the inhabitants of Berlin drink two hundred and six quarts of beer each annually, and those of Munich, whose thirst is proverbial, imbibe five hundred and sixty-six quarts each in the course of a year, or a little over three pints a day.

In the item of extirpation of goitre Swiss surgeons are ahead of American operators in the rate of primary mortality. Reverdin, of Geneva, has lately collected statistics of 6103 thyroidectomies, in which the death-rate is shown to be 2.88 per cent; but eliminating the older complicated operations, the mortality is but a trifle above zero.

It is said that the authorities of the Pasteur Institute are of the opinion that germs of influenza are possibly brought here in letters from New York. In support of this theory they recall the fact that the epidemic of the grip in 1890 came from Russia, and that the first persons infected were the post-office employees who handled the Russian mails.

Dr. Rene du Bois-Reymond, son of the late distinguished physiologist, intends to publish his father's lectures on "The Physics of Organic Metabolism," which have never been printed. Through the newspapers Dr. du Bois-Reymond appeals to former students who have full notes, and particularly those who have shorthand notes, of the course, to place them at his disposal for a time.

According to the *Medical Record*, three brothers in a town near Albany recently went insane. The first died in the State Hospital at Poughkeepsie, the second was adjudged insane after examination by a commission, and the third was seized the following day while brandishing a couple of revolvers with which he wished to kill some people who, he said, were shadowing him with the design of kidnapping. There is no previous history of insanity in any branch of the family, and no cause for the triple outbreak is known to exist.

Luigi Galvani, the great anatomist of the Bolognese school, and better known for his discovery of animal electricity, received on Sunday, December 4, at Bologna, the honor of a centenary celebration—that of his death, which took place on December 4, 1798. The occasion evoked the presence of the leaders of the local medical school, and its orator was Signor Erminio Vitta, representing the committee of Italian telegraphists now organizing a similar commemoration of Alessandro Volta. The proceedings were highly successful.

A New York drummer, says the *Medical Record*, was recently found dead in his bed in a Cincinnati apartment house. The wife

made a complaint to the police that her husband had been killed by the physician, who had given him an overdose of morphine. The latter admitted having given the man, who was suffering from delirium tremens, two hypodermic injections of one-fourth of a grain each of morphine. The coroner after an examination found that death was due to acute alcoholism and not to opium poisoning.

A STORY is going the rounds of the Parisian press concerning a remarkable operation said to have been performed by Dr. Malherbe. A laundress had her scalp torn off by machinery, and the trophy was left hanging thereon, while the victim was hurried off to the nearest hospital. The surgeon on duty sent back for the missing scalp, shaved it, and after the necessary cleansing, secured it in its original position, where it has since taken a firm hold, and the patient is reported to have been discharged a week later none the worse for her adventure.

THE London *Times*, speaking of the late Sir William Jenner, says: "His medical brethren recognized in Jenner a man of sterling honesty, without the slightest tinge of quackery or of pretence, and in whose hands the honor and reputation of the profession were absolutely secure. He was very proud of his position in this respect; but for a medical reputation with the public he cared nothing, and was very chary of doing anything which might even have the appearance of desiring to obtain it. When at the zenith of his fame he worked inordinately hard, and his consultations were often fixed at 8 A.M., or even earlier. It may be of interest to add that on his own statement his professional fees had amounted (probably as a maximum) to £13,000 ($65,000) in a year."

DR. DEBOVE, of Paris (*British Medical Journal*), says that alcoholism is present everywhere in France—in the towns, in country villages, and among all classes. The resources and strength of the country are impoverished by this vice. It is no longer a condition of acute and sporadic alcoholism; alcoholism is now chronic in France. That country, according to Dr. Debove, has the unfortunate supremacy of being at the head of all the "ethylic nations." The proportion of alcohol at 100° drunk amounts in Paris to 14½ liters per head, in Belgium and Germany 10 liters, England 9 liters, Switzerland 8, Italy 6, Sweden 4, Norway 3, Canada 2. This unenviable supremacy is on the increase, as it is in Belgium, the proportion in the other countries being a descending scale. There are in France 500,000 wine shops; in the north of France one for every twenty-five adults; in Paris one for every three houses, not counting the railway

station bars; in the Seine Inferieure Department one for every twenty-two adults. Dr. Debove says that no one escapes this epidemic—children, young girls, men, women, all suffer from it. In some parts of France nurslings are brought up by bottle *a l'alcool.* Dr. Debove calls upon the medical world by example, and by carrying on a crusade against this invading tide of alcoholism, to try to stem it.

An Obstetrical Charm.—From an ancient 4to MS. formerly in the collection of Herbert, dated 1475, is transcribed the following charm, to be bound to the thigh of a lying-in woman:

For woman that travelyth of chylde, bynd thys wryt to her thye: In nomine Patris † et Filii † et Spiritus Sancti † Amen. † Per virtutem Domini sint medicina mei pia crux et passio Christi. † Vulnera quinque Domini sint medicina mei. † Sancta Maria peperit Christum. † Sancta Anna peperit Mariam. † Sancta Elizabet peperit Johannem. † Sancta Cecilia peperit Remigium. † Arepo tenet opera rotas. † Christus vincit. † Christus regnat. † Christus dixit Lazare veni foras. † Christus imperat. † Christus te vocat. † Mundus te gaudet. † Lex te desiderat. † Deus ultionum Dominus. † Deus preliorum Dominus libera famulam tuam N. † Dextra Domini fecit virtutem. † a. g. l. a. † Alpha † et Omega † Anna peperit Mariam, † Elizabet precursorem, † Maria Dominum nostrum Jesum Christum, sine dolore et tristicia. O infans sive vivus sive mortuus exi foras † Christus te vocat ad lucem. † Agyos. † Agyos. † Christus vincit. † Christus imperat. † Christus regnat. † Sanctus † Sanctus † Sanctus † Dominus Deus. † Christus qui es, qui eras, † et qui venturus es. † Amen. bhurnon † blictaono † Christus Nazarenus † Rex Judeorum fili Dei † miserere mei † Amen.

We shall be glad to have an explanation of "Arepo tenet opera rotas," "a. g. l. a.," "bhurnon," "blictaono."

In a kissing contest, says the *Medical Record*, for £5 a side, which has just been declared off in a small town in Lancashire, the challenger sank exhausted at the seven hundredth smack, his opponent having scored eighteen hundred in the hour. Over in Germany at about the same time a young lover wrote to his sweetheart that he sent her ten thousand kisses. She sent back word that that was all well enough on paper, but that he had not the nerve to perform the feat in a truly manly way. This challenge was likewise accepted, and ten hours' time was allowed, with brief intervals for malt refreshments. At the end of the first hour the score was two thousand, and the condition of both active and passive participant good. One thousand more were added in the second hour, but at the seven hundred and fiftieth kiss on the third round the young man's lips became paralyzed and he lost consciousness. This fate, which some might consider merited, should prove a warning to promiscuous kissers as well as to those who osculate with persistence. It is not paralysis alone, but insanity, which may follow such efforts.

Dr. David Gruby, whose death was recorded in the *British Medical Journal* of November 26, 1898, was, according to that journal,

one of the most eccentric as well as one of the most successful physicians in Paris. How much of his success was due to his eccentricity it would be difficult to say, but though the oddity of his manners and methods was to a large extent deliberate, he was not a quack. He wrote prescriptions covering several sheets of paper, but consisting chiefly of harmless ingredients in a vehicle of aqua fortis. He exacted the strictest obedience, and insisted on a ritual of minute observances, such as walking to the Arc de Triomphe on one side of the Champs Elysees, and coming back on the other; eating gingerbread and cheese at five o'clock in the morning, and apples at midnight; putting so many grains of salt into an egg; or leaving a particular window open in a room for twelve days and twelve minutes. In this way he did good to many hypochondriacs by making them give their whole mind to the carrying out of his instructions, and thus leaving them no time to think of their symptoms.

To speak of a color-bind artist sounds like joking, said a noted London oculist; but strange as it seems, there are several persons so affected who can nevertheless paint extremely well. Numbers of color-blind people there are, of course, who draw perfectly in pencil, ink, and crayons, but I myself know a scene painter attached to a provincial theater who, though "color-blind," paints all its scenery, and has quite a local name, not only for his "interiors" and oak chambers, but even for landscapes. I can tell you also of two London ladies who consulted me for color-blindness who paint really beautiful pictures. One is the daughter of a late famous artist, and was taught painting by her father. She is quite unable to distinguish red from green, but her colors are labeled with the names, and she has been taught which to use for certain effects. Possibly her painting may seem to her eyes, as it were, drawing with a brush and "shading" with the colors. The other is a lady artist of some celebrity, who has for years exhibited annually in London. The public are not aware that she is color-blind. She painted the "Wedding Group" for a certain noble bridegroom a year or two ago, and also several public men's portraits, and one of an eminent physician fetched 500 guineas. There is a gentleman residing at Kensington who, having years ago left the navy through finding his advancement hopelessly barred by his color-blindness, is at present making several hundred a year by his brush as an artist, designing most artistic and brightly colored picture "posters" for advertisement boards.—*Scientific American.*

NEW PUBLICATIONS.

SO-CALLED SPASMODIC ASTHMA.

Under the above title Henry J. Glaisher has published an interesting and instructive address from the pen of Dr. Kingscote, on a series of ten cases of obstinate asthma resulting from dilatation of the heart and consequent irritation of the vagus. He lays considerable stress on the mechanical pressure of a heavy dilated heart, as evidenced by the position assumed by patients during an asthmatic paroxysm. He notes the fact that asthma of long standing produces so much emphysema of the lungs that accurate diagnosis of the heart condition is difficult. His treatment, which has given remarkably gratifying results, consists of a modification of the "Schott treatment" as used at Nauheim, combined with respiratory exercises.

On So-called Spasmodic Asthma, Considered from an Entirely New Standpoint with Regard to its Radical Cure. By Ernest Kingscote, M.B., C.M., L.R.C.S. Edin., Fellow of the Medical Society of London, etc. London: Henry J. Glaisher, 57 Wigmore Street, Cavendish Square, W.

THE PRACTITIONER'S MANUAL.

This is a work which is destined to be extremely popular. In it will be found short dissertations upon all medical diseases, together with a great number of prescriptions. The formulæ are by eminent men in this country and abroad, the favorite prescriptions of individual practitioners. The work is a great deal more than a mere formulary, and will be found a convenient manual for the desk or the carriage. The book is presented in admirable form, and the publisher's part has been attended to in the excellent way which characterizes the work of the house from which it is issued.

The Practitioner's Manual. A Condensed System of Medical Diagnosis and Treatment. By Charles Warrenne Allen, M.D., Consulting Genito-Urinary Surgeon to the City (Charity) Hospital; Consulting Dermatologist to the Randall's Island Hospital, to the Hackensack Hospital, to the Bayonne Hospital, to the Infant Asylum of the Holy Rosary; Attending Surgeon to the Good Samaritan Dispensary (Department of the Skin), etc. Octavo IV; 851 pages. Muslin, $6.00 net; half morocco, $7.00 net. New York: William Wood & Company.

SURGICAL ESSAYS.

The author of this little volume is a well known clinical teacher in England, and at the request of some of his friends has gathered together some dozen of his clinical lectures. The essay on Cleft Palate is a practical dissertation upon that subject. The remainder of the articles deal for the most part with matters of orthopedic surgery. The lectures will be read with considerable interest.

Cleft Palate; Treatment of Simple Fractures by Operation; Diseases of Joints; Antrectomy; Hernia, etc., etc. By W. Arbuthnot Lane, M.S. London: The Medical Publishing Company, Limited.

A SYLLABUS OF MATERIA MEDICA.

This is an extremely useful little book for the medical student to carry in his pocket, and refer to in moments of leisure or doubt. As much of the science of materia medica is a matter of memory, the method whereby it is proposed to memorize becomes an important desideratum. This has been happily achieved in this little work.

A Syllabus of Materia Medica. Compiled by Warren Coleman, M.D. New York: William Wood & Company, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Two Cases of Gastrostomy Caused by Foreign Bodies in the Esophagus.

Herrfeld (*Deutsche Medicinische Wochenschrift*, No. 27, 1898) reports the following cases:

One week before entering hospital a laborer had swallowed a bone while eating his dinner, since which time he had been troubled with severe pains in the stomach and was only able to swallow liquids. A foreign body being located thirty-two centimeters behind the teeth, its extraction *per vias naturales* or by esophagotomy was deemed impossible on account of its position; so gastrostomy was resorted to. A thin probe was passed by the mouth through the fistula into the stomach; to this a rubber tube, furnished at both ends with strong silken thread, had previously been attached. The probe was then drawn back, leaving the affixed tube in its place with one thread hanging from the stomach wound, the other from the mouth. Upon this a small flat substance covered with little indentations fell from the mouth. A still larger tube was next attached to the thread hanging from the stomach wound and drawn through the cardia into the gullet. This process was repeated with still larger tubes, gradually enlarging the stenosis. The stomach fistula closed without further operation. Patient has since been able to swallow all kinds of food.

In the second case a laborer, twenty-two years old, who could give no reason for nor showed any signs of stricture, had for fourteen years suffered from short spells of difficulty in breathing, when he was only able to swallow soft foods. During the latter end of March he again suffered from the trouble, which attacked him immediately after eating a sausage, and since had only been able to swallow liquids. Several probings having encountered an impassable obstruction, the patient became continually weaker. A subcutaneous injection was given, after which patient suffered from a collapse. Having slightly recovered, gastrostomy was resorted to and expansion effected by means of graduated tubes, as in the first case. Upon the evening of the operation patient ejected a decayed sausage end, and has since been able to swallow ordinary food. The after-treatment was the same as in the first case. No cause being found for the existence of a traumatic stricture or a tumor in the esophagus, against which the rapid disappearance of the symptoms speak very forcibly, a spasm of the

esophagus of this duration, especially in an otherwise healthy individual, is not to be considered; therefore the contraction must have been hereditary, either from diverticulum or from stenosis. As argument against this latter form we have the periodical trouble in swallowing and the free passage of large-sized tubes after the elimination of the obstruction. On the other hand, the case may be compared with one of diverticulum, the sausage end first causing expansion, and thus displacing the lumen of the esophagus, and the cæcal end collapsing as a pouch after the removal of the obstruction, so leaving the passage free.

The Hypodermic Use of Mercury in Syphilis.

Dr. S. S. Jones (*Journal of Cutaneous and Genito-Urinary Diseases*, Dec. 2, 1898) presents a few practical observations based on personal experience in private practice, and gives the results of his endeavor to rid the method of its most objectionable feature, namely, its tendency to occasion pain, inconvenience, and even great suffering. He had been inclined to look unfavorably upon the method from considerations of pain and annoyance, until he came to face the necessity for its use in a critical case of brain syphilis, which led him to seek some method for lessening its disadvantages.

For convenience in use, the author had a tablet made containing bichloride and sodium chloride, of each one-fourth grain, cocaine one-sixteenth grain, which he found could be readily serviceable and at hand.

The author believes the method superior to others: (1) where danger threatens organs whose functions are vital or important, as lesions of brain, heart, eye, or ear; (2) in ulcerations resembling tubercular or malignant disease, especially of the tongue; (3) in those cases where other methods are not tolerated or when time is valuable.

The injection should be made into muscle, the needle being washed after charging syringe. The author, however, has found it not always possible to inject into muscle, and has found no ill results from injection into the subcutaneous cellular tissue. He believes the most eligible sites to be in the cellular or muscular tissue between the scapulæ and the iliac crests.

A New Operation for the Radical Cure of Hemorrhoids.

R. J. Schiff, in the *Medical Record* of December 31, 1898, describes an operation for the radical cure of hemorrhoids. He says that he thoroughly stretches the sphincter and passes a plug of iodoform gauze into the bowel as a precautionary measure. If there is a circle

of hemorrhoids divide it into quarters and operate on one quarter or one hemorrhoid; seize the mass or hemorrhoid with a clamp, and while making traction make an elliptical incision encircling the mass, and carefully cut from the cutaneous surface inward and upward, leaving the vessels the last part to be severed, and as soon as the vessels come into view grasp them with an artery clamp and separate the entire mass from its connections with the bowel. Now ligate the vessels and suture the mucous membrane and cutaneous wounds, as in any other wound in which primary healing is sought. This completes the operation.

The writer makes the following claims for this manner of operating:

1. The patient is well in from three to five days; there is no lengthy convalescence.

2. During convalescence there is less pain than in other operations.

3. By the fourth or fifth day the patient is able to attend to his business.

4. The only difference in time in this operation and that by clamp and cautery is in that consumed in suturing.

5. There is less danger of secondary hemorrhage in this than in Allingham's or the cautery operation.

Laparotomy for Intestinal Perforation in Typhoid Fever.

Harvey W. Cushing, in the November number of the *Johns Hopkins Hospital Bulletin*, contributes a carefully prepared essay on this subject, and from his observations draws the following conclusions:

The diagnosis of intestinal perforation in typhoid fever may present many difficulties. No abdominal symptoms either subjective or objective should be regarded as trivial. A sudden change of any sort in the patient's condition should lead to the suspicion of this most serious complication. A distinction should be drawn between the two varieties of perforation, the appendicular and those occurring in the free bowel. Many cases of perforation of the free bowel present signs of a preperforative stage which calls for a laparotomy in anticipation of a complete perforation with extravasation.

When the diagnosis is made operate, whatever the condition of the patient. In no case may operation be too late. A precocious exploration from an error in diagnosis is not followed by untoward consequences such as must follow a neglected and tardy one.

Our present knowledge amply corroborates the statement of Mikulicz in 1884: "If suspicious of a perforation one should not wait for an exact diagnosis and for peritonitis to reach a pronounced degree, but on the contrary one should immediately proceed to an exploratory operation, which in any case is free from danger."

Operative Treatment of Lupus.

Buschke (*Berliner Klinische Wochenschrift*, 1898) remarks that this method should be followed: Every case of lupus should be treated operatively, palliative treatment being adopted only when some objection to the former is forthcoming. In relation to operative treatment, the speaker advises massage, that the patient may the sooner be operated upon, and that when possible the Schleich anesthesia should be applied. The excision must extend two centimeters beyond the affected spot, and during the operation infection of the wound by infectious virus should be most carefully guarded against. In plastic operations extreme care should be exercised that the skin drawn over be perfectly healthy. Of the palliative methods, that deserving the highest merit is the *excochleation* method and cauterization followed by treatment with pyrogallic ointment, though it is very painful. When possible, however, the above method may be substituted by the hot-air treatment. No very favorable results have as yet been obtained by treatment with tuberculin. Plasters made by combining salicylic acid with creosote, wet dressing with sublimate and five-per-cent solution of cresolin, are occasionally effective. In the first stage of lupus only can electrolysis be applied. The application of cosmo-arsenic paste is practically useless.

Surgical Hints.

The January number of the *International Journal of Surgery* contains the following valuable hints:

Before giving ether to patients suffering from catarrh of the nasal passages, wash these out with an alkaline solution. This will, by cleaning out the secretions, allow much easier breathing, and hence increase the facility with which anesthesia can be induced.

Scalp wounds should always be stitched, if of any size. But always remove the stitches very early; otherwise they may act as setons, and lead to suppuration, which, if it reaches the loose layer under the aponeurosis, is likely to be serious. These wounds only gape if the scalp muscle or its aponeurosis is incised, and very few stitches are needed.

In cases of felon, find out as soon as possible whether the bone is attacked. Should the terminal phalanx become loose, amputation will nearly always give the most useful finger, especially to workmen. The amputation, however, is best delayed until the septic process is overcome, or else the flaps will probably die, and the time needed for healing by granulation will be greater than that taken up in previous antiseptic treatment.

Operative Treatment for Cranial and Spinal Bifida.

In an address given by Isnardi at the Congress of Italian Surgeons in Turin, October 7, 1898 (*Munchener Medicinische Wochenschrift*, No. 49, 1898), he reports that out of three cases of spinal and three of cranial bifida he witnessed four absolute cures and two deaths.

Two cases of meningocele healed exceptionally well. One of these cases, in which hydrocephalus developed with pronounced enlargement of all cranial sutures, showed by autopsy that the suture involved in the operation had suffered no enlargement. A resection performed by the Kranke method, followed by an ossa suturarum of the aperture, was found necessary in one case of spinal bifida.

An example of great interest was furnished by a little child, upon whose head an exceptionally large pendulous tumor had formed, which when opened was found to contain 200 grammes of a clear, almost transparent, fluid. In the deeper portion of the swelling was discovered a solid tumor, greatly resembling a uterus in shape, being furnished with broad ligaments, the pedicle passing through the skull to the corpus callosum, while upon the walls of the cavity were convoluted flaps of nerve tissue. The child's brain has since become perfectly normal, which leads the speaker to consider the growth an actual tumor and not cerebral hernia. This theory, however, may not be decided without microscopic examination of the removed tumor.

Immunity and Superinfection in Chronic Gonorrhea.

Jadassohn (*Berliner Klinische Wochenschrift*, 1898) speaks at great length upon immunity and superinfection in cases of chronic gonorrhea, and arrives finally at the following conclusions: (1) The membrana mucosa of chronic gonorrhea reacts through increased inflammation, as much upon the augmentation of its own gonococci as upon inoculation with foreign gonococci; (2) it reacts no longer upon gonococci peculiar to itself, though it does upon foreign gonococci; (3) it reacts neither upon its own nor foreign gonococci; it is immune against chronic gonorrhea.

Infiltration Anesthesia.

Braun (*Archiv für Klinische Chirurgie*, vol. xxvii, September, 1898) makes an exhaustive investigation into the general principles of local anesthesia. The substances experimented with included guaiacol, guaiaryl, anesone, orthoform, and eucaine. The author found most of these more or less irritating. An examination of beta-eucaine furnished the best results, and the author says there can be no doubt

that cocaine and beta-eucaine are the only two substances to be considered in the selection of a drug for infiltration anesthesia. They alone paralyze without irritation and without injury to the tissues, and they alone effect an anesthesia lasting long enough for practical purposes. Even in extreme dilution the advantages of beta-eucaine over cocaine are such that the author says it is to be preferred because it is less poisonous and less specifically irritant, and because its solutions are permanent and can be boiled as often as necessary.

Aneurism of the Ileo-Femoral Artery.

In every case, when possible, compression should be attempted, that either a cure may be effected or the collateral circulation at least be controlled. Operative procedures must then be commenced, when total extirpation, if practicable, is the surest method.—H. H. in *Wiener Klinische Wochenschrift*, 1898, No. 47.

MEDICINE.

Sleep in the Treatment of Disease.

Wm. Evart, in an address delivered before the Harveian Society (*British Medical Journal*, Dec. 17, 1898) on "Disease and its Treatment," has the following to say on the value of sleep:

"Sleep has two offices, both fulfilled in the long sleep of the night, which it is our usual endeavor to secure for our patients, namely, that of favoring the slow changes of repair, and that of interrupting consciousness by uncoupling the chain of neurons, or by relaxing protoplasmic tension or tone. This relief of tension is, it would seem, the only office performed by the shorter spells of sleep, and therefore the two forms of sleep suggest two therapeutic objects. The night's sleep which comes without any drugs may need to be bettered, and in improving the quality of spontaneous sleep our help is often of value. It might also need to be prolonged.

"The systematic prolongation of sleep for the cure of disease is one of our opportunities hitherto little used. In chorea, sleep entirely subdues the muscular agitation, and this observation has led to the attempt to arrest the disease by prolonging sleep for considerable periods. A complication arises in connection with alimentation which in this disease, as in most other nervous troubles, is of primary importance. Partly for this reason, and because more than rest may be needed for a cure, the results hitherto reported have not sufficiently recommended the method.

"Prolonged narcosis has also been suggested in excessive wear

and tear of the nervous system; and in various nervous affections, including the mental, its renewed trial, combined with suitable methods of feeding, might lead to encouraging results.

"Best suited, perhaps, to our every-day needs is a systematic resort to the shorter sleep. Like the light instalments of food which restore the lost function of appetite and digestion, short sleep in the day may be essential to the cure of nocturnal insomnia. Our growing wealth in hypnotics warrants a hope that a suitable agent may yet be found which in that direction would minister to the health of the invalid, and might command the luxury of sleep at any opportune time for the convenience of the worker.

"Body rest as a systematic therapeutic agent has long found its place in our treatment for patients whom weakness alone, in the absence of medical advice, would not have compelled to take to their bed. To that class belong the frail women in whom the debility of anemia, of dyspepsia, and of overfatigue develop symptoms often mistaken for hysteria. Rest in bed is their first need. In the treatment of chlorosis this is now recognized as the essential element for a rapid recovery. Its methodical employment forms an essential part of the Weir Mitchell plan. But its most striking instance is that of the open-air rest cure for phthisis, which within quite recent years has largely replaced at foreign sanatoria the previous method by muscular exercise."

Bromoform Poisoning.

Dr. Muller, of Munich (*Munchener Medicinische Wochenschrift*, No. 38, 1898), says that one of the latest cases with which he, in the capacity of city physician, was brought into contact was such a one as has exceptional interest for the medical profession. In the family of a certain country teacher were three children, who for some weeks had been suffering from pertussis, and the attending physician, who had already obtained most favorable results from the prescription of bromoform for this sickness, caused the same to be given the children in accordance with their respective ages, and gave strict injunctions that the dose should not be exceeded. These directions were followed until the father upon one occasion poured out too many drops into a spoon and was obliged to throw away all, to the disappointment of the child. Upon the afternoon of February 27, at one o'clock, the mother, who happened to be tending the children, was obliged to leave them for a few minutes. Her absence afforded the little two-year-old boy — who it appears had acquired a liking for the sweet-tasting drops — an opportunity to draw a little stool towards the window, and having climbed thereon,

reach for the glass containing the drops, which was kept in a corner of the window niche. Upon the reappearance of the mother the little boy ran towards her with the empty glass in his hand, crying, "Goody, goody!" As shown by the measure, he had drunk almost six centigrammes. After a few minutes a state like intoxication set in, and upon tickling the throat and administration of warm water the child commenced to vomit. He then fell into a deep sleep, disturbed by severe cramps which were distributed over the entire body, preceded by cessation of the breath and discoloration of the face. The doctor, who was called by telephone, returned a message that the child be given large quantities of milk, and at 3.45 P.M. he himself arrived, to find the child with closed eyes and its face bluish-white, while its breathing was faint and scarcely audible. The pulse was fluttering, hands cool, and the pupils of the eyes were contracted and fixed. Upon moving the child from its bed, one of the above mentioned cramp attacks commenced, which gave cause for fear of death. This fit subsided, however, though it left the jaws locked for a longer time than after the preceding attacks. By means of a carefully introduced stomach-tube, one and a half liters of lukewarm water was injected, and when removed was found to be only lightly mixed with food portions and smelled faintly of bromoform. Upon withdrawing the tube, however, the convulsion again set in, followed by palpitation of the heart and cessation of the breath, and although artificial respiration was immediately resorted to and continued for about three-quarters of an hour, no effect was produced, and at a quarter to five the child died.

Case of Diabetes Mellitus Treated with Thyroid Gland.

Murrell (*Medical Press and Circular*) reports a case of diabetes mellitus treated with the fresh thyroid gland made into the form of pills. Each pill contained four grains, and three pills were given three times a day—thirty-six grains in the twenty-four hours. At the beginning of the treatment the patient, a young woman, averaged 5848 grains of sugar a day.

The influence of the thyroid treatment on the amount of sugar passed was very marked. During the first fifteen days the sugar was estimated on seven occasions, and the average was 3057 grains a day. During the next eleven days seven more estimations were made, and the average of these was 1346 grains. The amount passed on the last of these days was 1180 grains, showing a fall on the thyroid treatment without restricted diet of 4668 grains for the twenty-four hours. The thyroid treatment was then suspended, and the patient was dieted. Nearly all starch and sugar were knocked off and she was fed solely

on milk, beef tea, fish, and a very little toast. An interval of two days was allowed to elapse, and then the estimations were resumed. Seven observations were made in eight days, and the average of these gave 1898 grains of sugar a day. The last of these observations gave 3440 grains in the twenty-four hours, so that on a restricted diet she passed 2260 grains more than she did on an unrestricted diet plus thyroid feeding. These observations on the urine, although few in number, were reliable.

The influence of the treatment on the quantity of urine passed was also well marked. Her normal amount before treatment was 112 ounces in the twenty-four hours. In the first set of seven observations under the thyroid treatment with unrestricted diet the average was 101 ounces; in the second set of observations under the same conditions it was eighty-five ounces. In the seven observations on limited diet without thyroid the average rose to 129 ounces. Thyroid is usually said to be a diuretic, but in this case it distinctly diminished the amount of urine secreted. The influence on the body weight was equally well marked, for on unrestricted diet and thyroid it fell from 93 pounds, first to 82 pounds and then to 74 pounds. Her lowest weight was 69 pounds, but a week later, on the unrestricted diet and without the thyroid, it rose to 73 pounds.

Her general condition on the thyroid treatment underwent a marked change for the better. She notably improved in strength, the thirst was less, and her mouth was not so dry.

The Pathology and Treatment of Acute Pneumonia Viewed from the Standpoint of Nervous Development.

Dr. T. J. Mays, in the *New York Medical Journal* of December 30, 1898, says he believes that the profession is too much inclined to regard pneumonia strictly as a local disease of the lungs, and to overlook the fact that its fountainhead resides in some important central nervous tract. He endeavors to show: First, that acute pneumonia is largely a developed mental disease; second, that the fundamental element in the life history of this disease is not so much a disease of the lungs as it is a disease of the nervous supply of these organs; third, that its complications and varying manifestations correspond in a great measure with the various developed mental changes which occur in the nervous system. Experiments have satisfactorily shown, says the writer, that acute pneumonia may be produced in animals by section of the pneumogastric nerves. The writer states that he regards acute pneumonia as a form of herpes zoster of the pneumogastric nerve. In regard to the treatment, he says that cold applica-

tions in the form of ice-bags over the region of the chest and the base of the brain are of great importance, as they seek to allay perturbation of the brain and nervous system and reduce the fever. Among drugs strychnine stands preeminent on account of the fact that it not only stimulates the nervous system in general, but invigorates the respiratory nerve supply in particular. To get its best effects, it should be given in $\frac{1}{30}$ to $\frac{1}{20}$ grain doses four times a day from the beginning and increased until the line of its toxic action is approached. Oxygen by inhalation is also an agent of much value for the purpose of overcoming dyspnea and cyanosis.

Heart Complications in Diphtheria.

Dr. C. M. Hubbard (*Boston Medical and Surgical Journal*) reaches the following conclusions, after having made post-mortem examinations in seventy-two fatal cases: A rapid pulse-rate in diphtheria is to be dreaded. Death usually results when it exceeds 150. A slow pulse—60 in children—is a sign often of serious heart trouble. Irregularities in the pulse occur in about ten per cent of the diphtheria cases, and are generally significant of cardiac complications. A systolic murmur at the apex is heard in about one case in ten, and its prognostic value depends upon the nature of the case. A *bruit de galop* in diphtheria is a fatal sign. After four weeks, with no heart symptoms in diphtheria, there is little probability of subsequent cardiac trouble in the convalescence. All diphtheria patients who have tachycardia, bradycardia, irregular or weak pulse, a systolic murmur at the apex, vomiting, or any paralysis, especially palatal, should be kept quiet in bed. The most important element in the treatment consists in absolute rest in bed. The vagus nerve in the fatal cases always had some evidence of degenerative changes. The weight of the heart was increased. The cause of death is usually from cardiac thrombi, dilatation, or paralysis, produced most probably by the toxin of the diphtheria bacillus.

Nephritis a Frigore.

In acute nephritis *a frigore* (*Medical Press and Circular*) the principal indication, according to Professor Lemoine, of Lille, is to combat the renal congestion produced by a decrease in the quantity of urine. Each time that the condition of the patient allowed it he applied eight or ten leeches over the kidney, followed by hot poultices, in order to favor the decongestion. Purgatives were always necessary, not only to relieve the congestion, but also to disinfect the intestine; an agent he preferred was castor oil. If the urine after this treat-

ment was not abundant enough he did not hesitate to inject half a pint of artificial serum. The patient was always recommended to drink three liters of water daily, one of which should be Contrexeville or Vittel water, the others simple or aromatized water, with a little salt when necessary.

Antitoxic Relation Between Bee Poison and Honey (?).

In the November number of the *Johns Hopkins Hospital Bulletin*, G. H. Stover contributes the following interesting case and asks to have some light thrown upon it by those experimenting on immunization:

Miss M——, aged thirty-five, single, consulted the author on September 9, 1895, on account of the rather unusual swelling of her right cheek following a bee-sting received some days before; the whole right side of the face was considerably swollen and she felt some constitutional symptoms.

After treatment for five days she recovered, and on her final visit made the interesting statement that while in the past she had never been able to eat honey—indeed, was nauseated by the smell of it, even—since being stung she had developed a craving for it, and found that she could eat it with complete satisfaction and with no ill results.

THERAPEUTICS.

Hydrotherapy of the Ulcus Ventriculi Rotundum.

W. Winternitz (*Wiener Medicinische Wochenschrift*, No. 21, 1898) says that in treating peptic ulcus ventriculi (a relative) hydrotherapy may exert its influence in three different directions, viz., etiologically, pathological-anatomically, and symptomatically. The writer frequently quotes M. du Mesnil, who claims that the acidity of the gastric juices may be extensively augmented by the diminution of alkali in the blood, which exists invariably in cases of chlorosis. According to Schulz chloralkali can be dissolved in a watery solution of carbonic acid through the formation of small quantities of hydrochloric acid, and on this account M. du Rochmont's example is to be understood as follows: From the carbonic acid of the blood and from the sodium chloride of the same small quantities of hydrochloric acid are liberated and immediately thrown off by the glands. Thus may chlorosis also be explained, and this only in antithesis to other anemias, not as in ulcus ventriculi, where, on the one hand, there is diminution of alkali in the blood, through which the walls of the stomach are no longer sufficiently protected by alkaline blood against

normal gastric juice, and, upon the other hand, where there is superacidity of the gastric juices. What may be accepted as the actual cause of the gastric ulcer may be described as a lesion of the mucous membrane occasioned by trauma or similar conditions. Other causes are derangement of the circulation, angiospasms of the gastric walls, etc., etc. The three mentioned phenomena—increase of alkali in the blood, diminution of the acidity of the gastric juices, and increased circulation—may all be allayed by actual water procedures. Strasser directs particular attention to the fact that thermic attacks are followed by an increase of alkali in the blood. As already shown by Winternitz, chlorosis offers no contraindications against cold-water applications, if they be only of short duration; they cause no actual nor extreme lessening of the temperature, and are followed by prompt and entire reaction.

Cardialgia may be effectively subdued by the following treatment: Cold sitz-bath (10° to 12°), lasting from three to five minutes; stimulating massage of from ten to fifteen minutes, patient lying the while. Very effective also are cold-water douches. This therapy must invariably be supported by thorough dieting. Winternitz recommends a strong milk diet.

In the treatment of hematemesis, the writer refers to the uncertainty of styptics and also to the administration of ice pills. The latter, melting very quickly, are ineffective, while a lukewarm water collects in the stomach and may act later as an emetic. He says that by lowering the temperature in the rectum extreme diminution of the stomach temperature may be produced, and, of course, *vice versa*, whereby the hematemesis is subdued, and further by external cool applications on the stomach, by introduction into the rectum of small pieces of ice, by which a cooling of the inner stomach and contraction of the gastric vessels are produced.

Formalin for Sweating Feet.

Gerdeck (*British Medical Journal*) advocates the use of formalin in this malady. The sole of the foot should be painted with pure formalin three times a day; between the toes only once, and not at all on the dorsum of the foot. In addition it is useful to pour four or five drops of formalin on the boot and warm it; this serves to disguise the odor of sweat, and is also a good preservative of leather. The results are said to last for three or four weeks, when a repetition of the treatment is necessary. If the pure formalin is objected to, 2- to 3-per-cent solution may be painted on more frequently. The formalin acts as a deodorant and is non-toxic. The skin becomes as dry as leather, and no longer sweats. No harm was observed amongst the soldiers whose foot-sweating was stopped by this treatment.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Pathological-Anatomical Structure of Varicocele.

Janni, at the Congress of Italian Surgeons in Turin, October, 1898 (*Munchener Medicinische Wochenschrift*, No. 49, 1898), discussing the pathological-anatomical structure of varicocele, directs attention to the Thomas carmine coloring of the elastic fibers and claims that it is not due to the retrogressive changes of the venous walls, conditional upon its expansion, but frequently to neoplasms of the elastic connective tissues of the intima, which assumes the form of an actual endophlebitis in knots or plaques and is often accompanied by neoplasm of the connective tissue of the median vein. These neoplasms have not the compensatory character ascribed to them by Epstein.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Epileptic Insanity.

J. H. McBride, in the *Southern California Practitioner* for December, 1898, summarizes the important features of epileptic insanity as follows:

1. All forms or varieties of epilepsy are liable to lead to insanity.

2. Nocturnal epilepsy and mental or cerebral epilepsy produce more rapid mental deterioration than other varieties.

3. Epileptic insanity may precede, take the place of, or follow a fit.

4. It may be a quiet type of insanity or the most violent mania.

5. The mania may occur only once in the course of the life of an epileptic who has the disease from childhood.

6. Epileptic insanity is a most dangerous form of mental disorder, as the subjects of it are suspicious, irritable, and impulsive, being conspicuously weakened in self-control.

7. A condition of mental automatism may follow an epileptic fit and may last for days, during which a person may transact business or buy a ticket and travel long distances, converse intelligently, and yet afterwards have no recollection of anything that occurred during the period.

8. Epileptic attacks may occur during sleep and not at any time or rarely during the waking state, and this nocturnal epilepsy is apt to be associated with violence and ultimate mental weakness.

9. Insanity is rather more liable to be associated with mild fits than with those in which the convulsions are violent.

10. Habitual epilepsy, if continued over a period of years, produces mental failure in some degree in all cases. Those who have a fit at long intervals, say once a year, do not, of course, come under the designation of habitual epileptics as the term is used here.

Remissions in Epilepsy.

The bearing upon prognosis of remissions in epilepsy is discussed by Wharton Sinkler in the *Journal of Nervous and Mental Disease* for August, 1898, and he calls attention to the fact that the curability of epilepsy and what constitutes a cure is as far from being satisfactorily settled as it was a century ago. It is unquestionably a fact that much ill-advised discussion of "cures" has been indulged in concerning cases in which there were only remissions of greater length than usual, and that many unwarranted claims have been put forth for this and that plan of treatment.

The author has collected twenty-four cases of idiopathic epilepsy in which there were remissions from two to twenty-nine years. He cites histories of cases in which there were intervals of twenty-nine, twenty-one, six, and five years respectively, and concludes: "After consideration of the cases above referred to, in which after prolonged intervals, even as long as twenty-nine years, there has been a recurrence of the disease, we are forced to the conclusion that it is not justifiable to consider any case of epilepsy cured, no matter how great has been the interval of freedom from attacks and appearance of normal health. Notwithstanding this unfavorable conclusion, the study of these cases brings out a fact which is satisfactory, for it shows that remissions of many years' duration may occur, in which the patient is in normal health and is able to pursue his life as if he had never suffered from epilepsy."

Locomotor Ataxia.

W. H. Riley, in the *Journal of Nervous and Mental Disease* for September, 1898, studies sixty-one cases of tabes, of which thirty-one gave a positive history of syphilis, while eighteen gave a possible history. In twelve it was denied or not ascertained.

The author calls attention to exaggerated skin reflexes and accelerated pulse as symptoms to which too little attention is paid and

which are therefore frequently overlooked. A dilatation of the pupil was noted in eight cases. As to mechanical injury as a possible cause of the disease he says: "The cases in which the disease has followed a mechanical injury, or in which there seemed to be a relation between injury and the development of the disease, are comparatively few, and the evidence that the mechanical injury caused the disease, or was even a factor in the causation, is by no means conclusive."

Two conditions are believed to be necessary to the development of the disease: a low resistance in the nerve elements and the presence of a toxin in the blood.

Treatment is directed along two lines: (*a*) to promote the elimination of poisons, and (*b*) to improve the general health and nutrition.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Edema of the Larynx.

Dr. Uchermann has described in the *Archiv für Laryngologie* a somewhat unique form of laryngeal edema under the title of "Œdema Laryngis Unilaterale Climactericum." Acute circumscribed edema of the skin and subcutaneous tissue and also of some mucous surfaces was described by Quincke in 1882. Other observers noted later similar acute edemas; Strubing described an edema of the larynx which he called angioneurotic in character; Osler has described a series of cases in which he had found the same trouble in five succeeding generations of the same family, two members of which died, probably of edema of the glottis. He called it hereditary angioneurotic edema. The disease bears a close resemblance to erythema multiformis, urticaria, and runs a similar course.

Uchermann states that similar erythemas often accompany the menstrual process, the localized edemas often following closely certain nerve distributions. They disappear after the flow is established or early in the postmenstrual period. Uchermann reports in detail a case occurring in a woman aged fifty-three, during the menopause, in which there was a decided edema involving the left aryepiglottic fold, causing severe dyspnea and lasting for several weeks, finally disappearing entirely after the close of menstrual life. It is plain enough that these cases are edemas of angioneurotic origin. The sudden onset, absence of inflammation phenomena, its distinct localization, its evident connection with the menstrual period, the fact of its being accompanied by other nervous symptoms of the menopause, and the

later course of the trouble (absence of tuberculosis and disease of the kidneys), all go to prove its character. Uchermann is of the opinion that the trouble is of vasomotor origin dependent on disturbance of the central nervous system.

Vascular Nævus of the Pharynx.

Before the last meeting of the Alsatian Society of Physicians in Strassburg, Dr. Oppenheimer (*Deutsche Medicinische Wochenschrift*) demonstrated a case of vascular nævus involving almost the entire left half of the face, and the side of the throat nearly to the middle of the sternum. Besides this external development, the left side of the pharynx was involved in a similar nævus, which covered also the left side of the soft palate, the left tonsil and its pillars, the ligamentum pharyngo-epiglotticum, and the left half of the epiglottis. The larynx was free from nævus. The nævus of the pharynx was of a deep, dark-red color, paling under pressure; on the border of the hard palate were to be seen isolated vessels enlarged and dilated. The patient stated that the nævus of the face had been present since infancy, but that that of the mucous surface had only been noticed for a year, though it is altogether probable that this latter was also congenital.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

The Bacteriology of Noma of the Vulva.

Freymuth and Petruschky (*Deut. Med. Woch.*) report a case in a child aged three years, in which the diphtheria bacillus was found, and which was treated with the serum. The child was admitted on February 2 with recent measles. There was much hoarseness and considerable dyspnea. On February 5 an extensive noma was observed in the external genitals. Cultivation experiments revealed, besides other microbes, one exactly resembling the diphtheria bacillus. The dysphagia, along with the laryngitis, rhinitis, and noma, suggested a mixed infection of measles and diphtheria, and therefore anti-diphtheritic serum was injected. The child gradually improved, the slough separating from the vulva. It received in all 6000 immunity units, and made a good recovery. Freymuth states that previous researches have shown noma to be due to various microbes. In the above case it was due to the diphtheria bacillus. Later in the disease exudation was observed on the uvula and palate. Noma was thus

successfully treated with antitoxin. Freymuth thinks that if a bacteriological examination is made, the number of cases due to the diphtheria bacillus will be found considerable.

The Treatment of Ringworm of the Scalp by Chloride of Sodium.

Geo. D. Perkins (*Lancet*, Oct. 22, 1898) says that for the past fifteen years he has treated every case of ringworm which has come under his care with chloride of sodium, and with complete success in every case. The first case in which he adopted this treatment was a chronic one of five years' standing. The child was well in three weeks and had no return. Many of the cases have been chronic. The method Perkins adopts is the following: Have some chloride of sodium finely powdered and mixed with a little vaselin to make an ointment. The affected part having been shaved, rub the ointment in well night and morning until the place is sore; this takes from two to four days. Then apply some simple application to aid healing. When well from the soreness, the hairs will be found growing healthily and the tinea trichophyton destroyed.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology, Detroit College of Medicine.

Diseases of the Eye and Ear and Their Relation to Diseases of the Teeth.

Pont (*Berliner Klinische Wochenschrift*, 1898) says that though known to science for many years, this connection has only latterly been thoroughly investigated. It is not alone diseases of the teeth, such as periostitis, pulpitis, and caries simplex, which occasion derangement of the eye or ear organs, but also operations upon the teeth, viz., extraction, etc. Derangements of the eye most common are conjunctivitis, keratitis, dacryocystitis, blepharospasm, and even blindness has been reported. The ear diseases are as follows: Pains in the ears, tinnitus aurium, hyperacusis, and deafness. All these derangements are wont to disappear simultaneously with the relative affections of the teeth, or upon the extraction of the latter. Children are troubled with the above mentioned maladies upon the appearance of their first teeth. Increase of temperature is occasionally produced, which when conjunctivitis exists suggests measles. Secondary derangements of the ear are found in adults upon the appearance of their wisdom teeth.

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ORIGINAL CONTRIBUTIONS.

LEPROSY IS CONTAGIOUS.

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

I notice in your issue of December 27, 1898, quite a lengthy original article from the pen of Dr. Roger S. Chew, of Wellesly Street, Calcutta, a gentleman with whom I have had some correspondence before. In the title of his article he asks: "Is Leprosy Contagious?"

Dr. Chew in his "over sixteen years' study of leprosy," so he wrote me, has seen 1083 cases of leprosy, and in none of these could he determine contagion as the cause. Against this view stands the conclusion of the Berlin Lepra Conference, where met not only men who had studied leprosy over sixteen years, like Dr. Chew, but leprologists who had devoted their lives to the study of leprosy, almost to the exclusion of any other medical interest, and who were at the time of the Berlin Lepra Conference, where they appeared, the representatives of twenty-two governments. Against the conclusion of this representative body of leprologists which met at Berlin, there stands opposed only the British Government, with its immense interests in British India, for non-contagion.

As you have published Dr. Chew's article, please publish this communication, with the following article of Dr. D. Enrique Robelin ("La Lepra es Contagiosa," *Crónica Médico-Quirúrgica de la Habana*, November and December, 1887). Dr. Robelin is the chief leprologist in charge of the Hospital San Lazaro of Cuba.

ALBERT S. ASHMEAD, M.D.

The objections contained in my previous article (see *Crónica Médico Quirúrgica* of last July, "Es o No Contagiosa la Lepra?"—"Is

Leprosy Contagious or Not?"),* by which I combated the ideas expressed in the recent academic discourse of my excellent colleague, Dr. Arango, have been attacked in one of the last numbers of this publication, that of the month of September.

After reading this speech with the utmost pleasure, together with its introduction, I feel compelled to interfere again in this debate. I shall support my views with two elements of the greatest importance, recent data and positive facts. With arguments of this kind I hope to refute the reasons produced against me, and demonstrate that leprosy to-day *is contagious, infectious, and inoculable.*

The disease transmitting itself in these three ways, as is shown by a number of positive facts, it seems useless to enter into details in regard to each of these terms. We all know what to think in regard to these pathogenic modalities. The chief point is that leprosy is transmitted by these means, and we need not insist upon distinctions to be made between these terms. As the disease is transmitted by these means, we may use one or the other of these terms (as we have done) in treating of this disease. In the course of this synthetic article I shall have occasion to rectify two other inaccuracies. I have committed them unwittingly, although to a certain degree I was justified, being supported by two *résumés* published in two periodicals—one political, the other scientific. However, these small mistakes do not weaken in the least what I have said. I shall discuss again certain points, trusting that by the data presented this interesting question will be decided—one of the most burning that is to be found at present in the whole domain of medicine.

Let us at once enter into the debate. Leloir in his work says that judging by the report sent to him by Verteuil from Trinidad, the latter *hesitated to pronounce.* Here are the textual lines of Dr. Verteuil: "To this question, so interesting for various reasons, I should be glad to make a categorical reply, but I have doubts. All considered, I am obliged to declare that for me leprosy is not contagious from individual to individual." Further on Verteuil, with a prudence that cannot be praised enough, adds, according to Leloir, the following: "It seems to me that in our investigations in relation to the causes of leprosy, we must take into account the propagation through marriage, the hereditary transmission, *and the intercourse between the diseased subjects, which would tend to make us admit that the disease can be propagated from individual to individual. In consequence prudence advises to adopt restrictive means. I do not hesitate in recom-*

*A translation of this previous article of Dr. Robelin's was published by Dr. Ashmead in the *Pacific Medical Journal*, November and December, 1897. The present article is published now in English for the first time.

mending isolation, which I believe to be a benefit both to the unfortunate lepers themselves and to society. This does not mean that I wish to be considered a contagionist; many facts are against this theory; and yet I do not affirm that leprosy can absolutely not be communicated. In the present state of the question, I say unhesitatingly that isolation is best."*

It appears by these quotations that the contradiction with which Leloir is charged does not exist; for it is Verteuil who speaks. The words of Dr. Verteuil, given in their totality, allow us to comprehend more largely the meaning, and corroborate what I have exposed in my previous article. On page 456 of the *Crónica* there are the following sentences of the report: "Verteuil, a member of the Council of Trinidad, says that he is bound to declare that leprosy is not contagious from individual to individual. He believes in the utility of isolation, but he does not wish it to be thought that he is in favor of contagion." Comparing these sentences with those above quoted, the opinion is contradictory, as it is evident that, although he does not believe in "contagion from man to man," this affirmation is destroyed in the following lines, the other gates of transmission being left open.

Verteuil favors isolation, a clear proof that he is not sure of non-contagiousness. Otherwise, would he be for isolation? Certainly not. Verteuil himself has pointed out the increase of the disease, due to want of isolation. This same fact—propagation of leprosy through want of isolation—is very common in our days, and it is one of the principal reasons which have decided physicians in leprous countries to advise restrictive measures.

I was compelled to discuss this opinion of Dr. Verteuil in order to present it as it ought to be interpreted; the opinions are discussed, being subject to the criticism of whosoever wants to criticize. If it was not so, we could not well discuss, because we should thus return to the famous epoch which we do not want to conjure up. [Does he allude to the Inquisition?—THE TRANSLATOR.]

In the report of my colleague I read the quotation of Magalhaes and Mayrinck, and I take pleasure in confessing that I committed a small inaccuracy, but this being admitted, I feel obliged to defend this same quotation,† at the same time rejecting that of the report. Here

*Report of Dr. Verteuil, communicated to Leloir, and quoted in his work, pages 299–300, Paris, 1886.

†It refers to the passages quoted in my first article, and taken from Leloir, page 300. Magalhaes and Mayrinck say: "It may be seen that leprosy was imported into Brazil by the Portuguese and Africans; for among the savages of Brazil it did not exist before the discovery of the country, *nor after it, in the individuals who did not mix themselves with the strangers.* It is therefore admitted as a fact that leprosy was imported. *The possibility of the spontaneous development of some cases was also admitted, though no instance of*

are the sentences of the report: "Sigaud assures us that he has not observed one single instance in the Hospital of the Lepers in Rio Janeiro, an opinion backed by Magalhaes and Mayrinck, who practice in the same country." Without doubt, if these physicians were quoted, "who had not observed one single instance of contagion in the hospital," it was with the intent of adding to the anti-contagionist contingent. Magalhaes and Mayrinck declare themselves "anti-contagionists." To this we may answer that if these distinguished doctors have not been able to observe one instance of contagion in the hospital of that city, we are not at all surprised;* the same thing happened to others, and, among ourselves, to Dr. Arango, on his own showing. That does not prove that it is always so, and the argument is of very little value. There exist numerous cases observed in various hospitals, as well as in private practice, and these cases of contagion reduce to nothing all the negative facts that can be produced.

Dr. Bemiss, of Mauri, H. I.,† mentions various cases of contagion, giving details about one of them, quoted by the Legislative Committee of the Sandwich Islands — an American of fifty-five years, of healthy parents and antecedents, who served as assistant for some years in the Hospital of Lahaina, and in whom the disease developed after he had taken out some lepers with whom he lived. In the Hospital of Molokai, near Honolulu, Father Damien,‡ a Catholic priest, who had isolated himself in the leprosery, in order to devote himself to comforting the victims, has just felt the first and undeniable attacks of the disease. What is more, in that same leprosery, where there is a personnel of 153, including physicians, assistants, and servants, a large number of employees have become lepers. That number is calculated at nine per cent‖ every year.§

Dr. Tache,¶ of Canada, reports the case of a man bruised on the shoulder while carrying the corpse of a leprous woman, being in immediate contact with the humor which had tainted the coffin; he

it appeared among the Indians." These distinguished physicians recommend isolation. If a population, to whom the disease is unknown, acquires it by its contact with strangers, has it or has it not been contaminated? The most evident proof lies in the fact *that among the savages of Brazil the disease never existed before the discovery, nor after it, in the individuals who did not mix up with the strangers.* No great effort is needed to see the generation of the disease. Besides, these authors *isolate* their patients. "*The facts,*" says Leloir, "*compel the greatest part of the authors, whatever their opinions as to the cause of leprosy, to recognize that its increase and propagation is in inverse ratio to the isolation.*"

* Besides, this argument is of little weight, for it is well known that hospitals are not the most favorable medium for the propagation of diseases.

† *New Orleans Medical and Surgical Journal*, April, 1880.

‡ H. de Verigny, "La Lèpre aux Iles Hawaii," in *Revue Scientifique*, 1887.

‖ H. de Verigny, *loc. cit.*

§ There are at this moment fifty-two employees who have become lepers.

¶ Quoted by Dr. Tache, of Canada. (See Memoire of Dr. White.)

became a leper some time afterwards, and died of the disease eleven years later.

Dr. Herman E. Hayd* mentions in his memoir presented, on his return from a recent journey to the leprosery of New Brunswick, the cases of the husband of a leper woman and of the wife of a leper husband, who both became lepers and died of the disease, the parents of both being healthy and without any vestige of leprous disease. For Hayd, it is a fact above doubt that leprosy is contagious; he supposes that a wound or excoriation is necessary to offer an entrance for the virus. He thinks that it is now generally believed that leprosy is *contagious, infectious, and hereditary.*† In the same manner this author has been able to appreciate the advantages of isolation, which was followed by a striking decrease of leprosy. Dr. Gordon, a North American physician, had occasion to make the same observation, as I stated some months ago.

Dr. Grönvold, of Norway, Minnesota, records the case of an individual who arrived in America in 1869, at the age of twenty. The disease appeared for the first time in 1873. Nobody else was a leper in his family, and it was believed that he caught the disease while he was in the service of a leper, a year before his arrival in America. Dr. Hausen, of Bergen (Norway), surgeon of the Leper Hospital there, published various cases in which inoculation had taken place (communication of Dr. Bendeke, of Minneapolis).

Dr. Lob, of Hong Kong, says that without any doubt leprosy is contagious. Dr. Friedel, of China, thinks that the disease is communicated by inoculation during the coitus. Drs. Wolff of Madeira and Wucherer of Brazil have published cases of contagion, although the latter does not admit the contagiousness of the anesthetic form. Dr. Manson, in his report published for the Inspector-General of Shanghai, in 1882, abounds in the contagionist sense. Tilbury Fox, in the last edition of his works, declares himself a contagionist. "Leprosy is contracted by contact with the diseased," says the author. Dr. Goldschmidt, of Madeira, contagionist, has published recently (1885) the case of a boy, born of healthy parents, who was contaminated by his leprous wet-nurse. Dr. Goldschmidt adds that such a fact is at least worthy of attention (mentioned by Leloir).

I could mention Drs. Planck, Tilbury Fox, Manget, Erasmus Wilson, Hebra, Kaposi, Vidal, and Carter, who have published observations of husbands contaminated by their wives, and *vice versa*.

*"A Visit to the New Brunswick Lazaretto," by Dr. Herman E. Hayd, read before the S. M. Q. of Buffalo, September, 1887.

†We agree with these views, which, in fact, are now prevailing. It is useless to enter into details, as it is well known what these denominations mean. There are reasons for admitting also that it is inoculable. Heredity is less than is believed.

Dr. Kaurin,* of Molde, Norway, has published a case of contagion, confirmed afterwards by Dr. Hitmann, physician of the district of Hitteren. I shall remark, in passing, that Dr. Kaurin, who until lately entertained doubt in respect to the contagiousness of this disease, admits it at present, as may be inferred from the following: "The more I occupy myself with this disease, the more evident it becomes to me that *it is transmitted from one individual to another.*" The same Dr. Kaurin a few years ago (1879) gave publicity to another case favorable to contagion, which happened in Snaassen, north of Trondhjem.

There are likewise instances of leprosy contracted by intimate contact with objects contaminated by lepers. I shall quote the following case communicated to Leloir† by Professor Cornil: "An official of the administration dies of leprosy in the island of Mauritius. His vacant place is taken by another employee, also French, who hires the same furnished apartment in which the defunct had lived. The lodgings are occupied just as they were, without any alteration, without disinfection, the man simply, as it were, putting himself into his predecessor's furniture. After some time the new official became a leper, and was compelled to return to Paris, to be treated there for tubercular leprosy by Dr. Cornil."

Dr. Leloir mentions a case of family infection, which took place through contamination during the coitus. This interesting information was published in 1858 in a work of Dr. Onetti (Senior), of San Remo, Italy.

I have myself communicated to the Society of Clinical Studies of this capital the following observations, which deserve to arrest for a moment our attention. They show that in Cuba the same things happen as elsewhere — that is, leprosy is transmitted. Besides the three cases which I quote to-day I propose to publish shortly some others. Here are the cases, for which I am indebted to the courtesy of Dr. Oxamendi; they prove once more that not only ulcerous leprosy is contagious:

There are in science numerous observations of leprosy contracted by direct contact with systematized nervous leprosy. In a factory of 260 hands there was a negro named Lorenzo, aged sixty, by nationality a Gangá. This negro, in whom appeared all the characteristics of anesthetic leprosy, was in due time isolated by the doctors, who were contagionists. Removed to a plantain plantation, at a kilometer distance from the factory, he lived very retired, apart from the other hands, occupied in the culture of the plantation and in the raising of

* Dr. Kaurin: *Annales Dermatologie et Syph.*, 1887.

† See Leloir, page 291.

poultry. He inhabited a small hut. From the factory there came to visit him very frequently his adopted son, Anastasio, of the Lucumi nation; he used to bring victuals and at each visit spent some time with the diseased man in his hut. This man after some time became a leper, with the same form of leprosy. The negro Anastasio's wife was a dark creole, the daughter of creole parents, who had never known anything of leprosy. After a while this woman became a leper, the form being the same as that of her husband's and old Lorenzo's leprosy.

These were the only cases of leprosy observed in that place, isolation having prevented the spread of the disease.

This observation is worthy of our attention. We understand very well that it may be objected that the adopted son could have contracted leprosy, not by contagion, but by heredity, his parents having been lepers, things about which we know nothing. But is it not strange that the disease should have waited, before making its appearance, until the man came in contact with another leper? Why did it not appear before? Moreover, to be the son of a leper does not imply that a man must, of necessity, become a leper. If, however, this case should not be admitted to be one of contagion, we have that of the woman, whose parents were not lepers and who was born in the country. There is no reason here to deny that the woman was contaminated by her husband, and the case may be considered as one of inoculation through coitus. Observe that all three had the same form of leprosy.

This observation corroborates the opinion, held by some dermatologists, that this form is as contagious as the tubercular. I believed at first that the nervous form was not contagious, but since I have seen certain cases, and read about others, of recent occurrence, I have no longer any doubt on the subject. There exist conclusive observations of inoculation in individuals who, having punctured anesthetic spots with pin and knife, were inoculated in their turn, puncturing themselves with the same instruments, and became lepers after a certain time. For me, in view of recent cases, I believe that this form may be contracted by contagion and inoculation.

To this instance I add the two following cases, which are very instructive with respect to the question of contagion:

Doña Chucha G——, seventy years of age, born at Cabanas, Cuba, the daughter of healthy parents, and whose grandparents, both maternal and paternal, were perfectly sound, strong, and robust. The antecedents of the whole family were excellent. This woman has always enjoyed very good health; it is impossible to have better personal antecedents. The husband, a man of regular life, strong and

robust, was attacked some years ago by a fever, having had during his life not the least malady. Several children were born to the couple; all lived in perfect health, except a daughter who died a short time ago of an acute disease.

Among the nearest relations of Doña Chucha there is a family which resides in the demolished factory of Don Roberto, and in that family there is a young man of twenty-five, a leper in the ulcerous stage; the ulcerations occupy the greatest part of the body. It is the only case of leprosy in the family. Doña Chucha visited this family very frequently, and consequently the leprous youth; she used to wash his linen, and the bandages which covered his many ulcers.

Doña Chucha had continued several years in this familiar intercourse, without anything happening; but in 1881, becoming aware that her body was covered with reddish spots and tumors, she consulted several doctors of Guanajay, and among others Drs. Pagés, Herrara, and Mulkay, who diagnosed leprosy. My excellent friend, Dr. E. Belot, who has had ample opportunities of getting acquainted with leprosy, confirmed this diagnosis.

Since 1881 the disease has followed its course, increasing considerably. At present the patient shows ulcers, spots, tubercles, and patches of complete anesthesia. In the face also there are anesthetic spots, and the lobules of both ears are infiltrated. Hands and feet also present their anesthetic zones, accompanied by leprous ulcerations. This case is therefore one of "complete leprosy," and there is no doubt that direct or indirect contagion, or perhaps inoculation, acts here as an important factor.

Doña Juana, a widow, of Barrera, suffered during twenty years of San Lazaro's evil, according to many physicians. She died of this disease in a state of complete ulceration, in the year 1881. She had three children, two girls and a boy. The girls were born sound, and enjoyed always good health. The male also was born healthy, but, living always with his mother, he presented the same leprous lesions. The disease developed itself, and reached its highest point when he was twenty-six; he died of it in 1885.

One of the daughters married a Cuban, Angel Mendez, who was healthy and whose family in Canarias presented no antecedents of disease. The husband of that girl nursed his suffering brother-in-law as well as his own mother-in-law, who was also a leper. These people lived in the same house. Some time after they had begun to live together, and while the leper relations (that is, the mother-in-law and the brother-in-law of the Cuban) were still living, the latter began to notice symptoms similar to theirs. He helped and nursed with great devotion, as we have said, those sick persons. The evil spread

and acquired some gravity, which decided him to come to Havana, in order to obtain my opinion as to his complaint, as well as proper treatment.

I attended Angel Mendez for two or three months; he presented a systematized tegumentary leprosy. At that time he came to consult me every fifteen days and found some relief. He finally disappeared completely.

Angel Mendez's wife died shortly after marriage in consequence of a laborious childbed. During her life she showed no leprous symptoms.

There can be no more evident case of contagion than this; for we have here a subject, sane, strong, and robust, without leprous antecedents, who contracts the disease through close association with his mother-in-law and brother-in-law. There is no reason to be brought forth against this fact; not even heredity can be claimed, Angel Mendez's parents being both healthy.

These observations show that cases of contagion exist, that the time of negation is past, and that it would be well, at last, to open our eyes to what is evident.

As to the opinions of Diday and Doyon, I may observe that the passages of these authors, which are quoted as being against my views, are well known to me. I must, however, say that Diday does not count, inasmuch as the second part of the work in question, which contains the article on leprosy, was written by Doyon alone, on the latter's own showing.* There remains therefore only Doyon, whose words in the second part of the book in question I quote here: "Formerly the elephantiasis of the Greeks was, in certain countries, believed to be contagious; even in our days the unfortunate lepers live isolated in separate quarters, in order to guard the rest of the inhabitants from their contact. But in our days it is demonstrated that leprosy is not contagious, and if we see the same family or the same locality attacked by it, this is due to the fact that the individuals remain subject to the same—still unknown—general influences, which preside over the development of the disease." †

Five years later, in 1881, in the notes which accompany the work of Moritz Kaposi,‡ we read the following lines: "The contagiousness of leprosy, received formerly as a patent truth, and then systematically denied, has become now again a problem which refuses to be disregarded. What physician, said one of us, in a critical study on this

*Diday et Doyon: Thérapeutique des Maladiès Vènériennès et des Maladiès Cutanèes.

†*Loc. cit.*, page 646.

‡Moritz Kaposi: Leçons sur les maladiès de la peau, traduites et annotèes par Doyon et Besnier, tome 2, page 312.

subject (*Gazette Hebdomadaire*, 1880), would dare now to inoculate leprosy? And can we explain the importation of leprosy from one nation to the other in the course of the centuries, if it is not by contagion? On this point, and for modern facts, consult 'La Lèpre est Contagieuse,' published in 1879 by a missionary engaged in the service of the leproseries. The conditions of transmission, of which we know nothing, the long incubation of the disease, the indefinite duration of its latent period, are doubtlessly so many causes of the obscurity which prevails on this subject. As long as this question is not scientifically answered in the negative we are of opinion that any measures of general or public precaution are justified, and by such measures alone can leprosy be rooted out or localized." (Note of the editors of the work.)

By quotation of the totality of the incriminated passages, the connection may be perceived, and it will appear how well-founded was my opinion. It is useless to insist, as the lines which I have just quoted are a corroboration of what I have said, and totally opposed to the opinion of my honorable colleague. And as I am speaking of Kaposi, this author, referring in his work to Drognart-Laudré, a contagionist,* says "that the idea of contagion has recently been received, as at the first appearance of the disease syphilitics, capable themselves of transmitting their own disease, refused to cohabit with lepers. Without doubt numerous cases of this kind are observed."† A little farther on Kaposi quotes a case of leprosy by contagion.

All the quotations from Hardy which are brought forth against me do not shake the force of my affirmations in the very least, because after all is said, they may be reduced to these two propositions: (1) that leprosy is probably contagious, and (2) that there is no scientific proof. We can oppose to the first positive facts: one of these facts alone would be sufficient to prove the contagion at once, and being so numerous *they impose themselves*. Those contained in this work will suffice to show whether the contagious and infectious character of leprosy is to be rejected. I do not care about the distinction between contagion and infection, although we are well aware of the difference which science sees between these two terms. It is enough for us that leprosy is transmitted by whatever means, among these means being contagion, inoculation, and infection.

Here are consigned a sufficient number of facts which are more convincing than anything I could say. Moreover the physicians of

* Drognart-Laudré: De la contagion, seule cause de la propagation de la Leprè, Paris, 1869.

† Kaposi: Path. und Therap. der Hautkrankheiten Freilich kommen da merkwürdige fälle vor.

the leper countries abound in this sense, especially those of Norway, who are all contagionists. In my first article I signalled these important data, showing that from 1848–53 and '63 the terms of the problem have greatly changed. Daniellson is now the *only anti-contagionist.* According to verbal communication made in 1884 to Leloir, Drs. C. Boeck of Christiania, and Sand of Trondhjem, are contagionists, and procured Leloir observations favorable to contagion.* Drs. Hansen, Eklund, and Rogge are of the same opinion, and so is the learned Inspector-General of the Health Service, Dr. Dahl.

As to Dr. Kaurin, of Molde, who at the time hesitated between affirmation and negation, as I said in my previous article, he has since taken sides with the contagionists,† and has published a recent observation in that sense.

The Sandwich Islands, another country eminently leprous, show us all their physicians zealous contagionists and advocates of isolation and sequestration, as in Norway. I do not think it necessary to describe the epidemic of those islands, which constitutes the best proof of modern civilization.‡ This epidemic is sufficiently described by Hildebrand, Saxe, Woods, Enders, White, Kneeland, Tryon, and Arning. Of late Dr. Vidal and Broeg have insisted on the importance of these facts for the theory of contagion.

Before leaving this subject (see for my data the previous article) I think it useful to observe that, as early as 1819–48, leprosy was imported into those parts, formerly untouched by it. In 1853 there was only one case in Honolulu, and in 1861 there were six. In 1865 the number of lepers amounted to 230. Finally, in 1881–82, and in a population of 45,000 souls, there are 4000 lepers. What greater proof do we want?‖

It will be confessed that the existing proofs are more than sufficient to prove the contagiousness of leprosy. For some years in these parts, most of the practitioners recognize that leprosy is transmitted by distinct means, and those of opposite views are very scarce. The

* See Leloir, pages 282 and 298, and my first article.

†*Ann. de D. et Syph.*, 1887.

‡ The immortal Broca, the founder of the Anthropologia, speaking of what has been done in remote regions, declares that, "il ose affronter tous les climâts ou d'autres hommes peuvent vivre, et ses colonies lointaines constituent de véritables expériences dout la science doit étudièr les resultats" ("he is not afraid of any climate, where other men have been able to live, and his far-off colonies are experiments, of which science will have to study the results").

‖ We have read with great pleasure the recent report presented to the Académie de Médecine of Paris, by our distinguished master and eminent dermatologist, Dr. Besnier. We agree in everything, and it affords us additional pleasure to draw from the same sources. Besnier is a contagionist, and the applause he obtained by the reading of his brilliant articles proves that the Academy of Paris *approves* his opinions. (See *Bulletin Médical*, 1887.)

numerous cases of contagion published up to this day, together with various epidemics, prove it in the most irrefragable manner. Among the latter are the small localized epidemics of Cape Breton and Louisiana, and the recent ones of the Sandwich Islands and Mauritius. To this must be added the evolution of the great epidemics, and their complete extinction by isolation. In this manner the disease localized itself in various provinces, while it disappeared from the center of Europe.

I have said that the physicians of the Sandwich Islands were contagionists, and in connection with this statement I may mention the recent article of H. de Verigny, published in the *Revue Scientifique* of the current year. The works published at the close of 1886 and beginning of 1887 may also be consulted.* Verigny shows himself a contagionist in said article, founding his opinion on various works proceeding from those islands, and published a short time before. It is an admitted fact that leprosy is now considered to be *contagious and infectious*, and that to show itself in this light it needs especial conditions and aptitudes, as is the case with all other similar pathological entities. I feel obliged to quote the following sentences of Verigny: "The microbic diseases are all contagious, because all the germs are easily received in our organism. What is difficult to explain is not the fact of contagion, but the immunity in spite of contagion. In order to understand this, we must take into account that microbian diseases develop in two conditions: it is necessary that the microbe be living, in good state, and that it penetrates into the organism under favorable circumstances. There is also required a predisposed medium that is chemically adapted to the life and nature of the microbe. This medium, no doubt, varies according to epochs, races, and climes; and for the same organism it may change within a short period. Hence the differences in the resistance to contagion, hence the exceptional facility which it finds in certain cases; and here we have also a light thrown on those cases, in which the contagion has met with such difficulties that men have been tempted to deny it. Yes, leprosy is contagious in the sense that the bacillus will develop on those points in which the organism lends itself to its development; but in others, where the organism resists, being unadapted to the life of the bacillus, the disease will not develop itself, in spite of all the probabilities in favor of contagion. It is not, for that matter, with leprosy alone that this happens; it is the same with a whole family of diseases produced

* I quote only that of Dr. Mouritz, physician of the leprosery of the Hawaiian Islands, in his Notes and Appendix to the Report on Leprosy, 1886; The Lepers of Molokai, by Ch. W. Stoddard; Report of Dr. Arning to the Board of Health, published recently in *Arch. m. Naval.*

by microorganisms. The physicians of the Hawaiian Islands have adopted this view; they do not doubt the contagiousness of leprosy, but count with the restrictions and conditions just mentioned. This way of presenting the question seems to be the only one consistent with the opposite facts observed in all leprous countries, and which have occasioned so much discussion." I wished to quote these lines of Verigny because they tally in substance with what I have said myself, though differently expressed. Verigny's opinions, expressed in his work of 1887, are founded on recent data, all belonging to the Sandwich Islands.*

(To be continued.)

A CASE ILLUSTRATING THE DIFFERENTIAL DIAGNOSIS BETWEEN DELIRIUM TREMENS AND TYPHOID FEVER—A CASE OF PNEUMOTHORAX FOLLOWING PLEURAL PNEUMONIA—THE KNEE IN TYPHOID FEVER.

BY PROF. J. M. DA COSTA, M.D., PHILADELPHIA, PA.

DIFFERENTIAL DIAGNOSIS BETWEEN DELIRIUM TREMENS AND TYPHOID FEVER.

The first case of which I speak is a very mixed one, and one which has had certain elements of doubt during its course. The man, a bartender, was brought to the hospital in a condition of marked delirium which suggested delirium tremens. The condition was a noisy delirium, accompanied by marked tremor. However, I was struck by the fact that the temperature was above normal, being about 101°. The suggestion of typhoid fever was raised, and in spite of other phenomena was entertained. The man was so delirious during the night, as well as during the day, that he was strapped to the bed, he still being confined in this way. He was not the subject of an unpleasant wandering, but was good-natured during the time of greatest violence.

As we see him this morning he is still delirious; the tongue is tremulous when protruded, and is coated in the center; the pulse is of fair volume, being 110 to the minute. There is a constant action of the lower jaw. The abdomen is swollen and the veins are distended, but there is no dropsy. The main point in regard to this region is the marked increase in the size of the liver, particularly as regards the left lobe. There have been a few doubtful spots. The spleen is

*They are as follows: Report of the Board of Health to the Legislative Assembly; Leprosy in Hawaii; Appendix to the Report on Leprosy of the President of the Board of Health, by Dr. Mouritz; Leprosy in Foreign Countries; Summaries of reports furnished by foreign Governments; Report of Dr. Edward Arning to the Board of Health; The Lepers of Molokai, by Ch. W. Stoddard.

not much enlarged. The Widal reaction has been tried and is positive. There has also been one hemorrhage from the bowels, amounting to about one quart of blood. The case has been a puzzling one and is still difficult of solution, as there are two distinct possibilities that must be weighed.

The first is that of delirium tremens, with hypertrophic cirrhosis of the liver. The hemorrhage might be the result of this, as such an occurrence is not at all unusual in these cases. In favor of this view is the fact that the patient is a bartender, and during a lucid interval has admitted that he was on a debauch of three weeks, ending up in his present attack. Also the character of the delirium is suggestive of this condition, and consequently that was our first opinion.

The second possibility is that of typhoid fever. The hemorrhage might have occurred from intestinal ulcers. The Widal test is also in favor of this view of the case. Of still greater importance is the continuance of the fever, though it has not been a high one. This is not characteristic of delirium tremens or of cirrhosis of the liver. We have here, then, a nicely balanced case in which the symptoms point to two conditions, in which the symptoms may be almost identical.

Now there is no doubt as to the presence of delirium tremens and cirrhosis of the liver, and I have also come to the conclusion that we are dealing with a case of typhoid fever in addition. I reach this conclusion mainly because of the fever which has persisted. The Widal test is also of some evidence. The man's occupation, his debauch, the delirium, all these tend to delirium tremens. Probably the little water he drank during the debauch was not of the purest, and in this way received the typhoid bacilli, and the fever came in addition to the other attack.

What has been the treatment of this man? His condition when brought in was such that the essential thing to do, irrespective of the cause, was to pay great attention to checking the delirium. From this point of view camphor and morphine was given, and also chloral in the dose of ten grains every fourth hour. This modified the delirium and restlessness. With the idea of delirium tremens we gave him a tablespoonful of whiskey every two hours. In the way of general treatment he is getting one-fortieth of a grain of strychnine every fourth hour, and is given a diet of meat broth, etc. While the hemorrhage was occurring it was combated with acetate of lead and opium.

PNEUMOTHORAX FOLLOWING PLEURAL PNEUMONIA.

We have here a case of great clinical interest on account of its rarity. The patient is an Italian boy of sixteen, and his history is

difficult to obtain. So far as we can make out there is no tuberculosis in the family, and he has had no illness previous to his present one. Three weeks ago he was exposed to much cold, which was followed by a pain in the right shoulder and slight hacking cough. Two days later he had fever and the cough increased. Five days ago, after feeling fairly well for a time, he had a sudden attack of great dyspnea. Two days after this occurrence he expectorated some pure blood, and on the day following had nosebleed, which was probably from retained blood in upper nasal passages.

An examination shows dulness over the lower part of the right lung, with a friction sound above, and tympany over the upper part of the lung. When he coughs or speaks there is a metallic sound. The breath sounds above are also amphoric. The dyspnea has lessened and the sounds are somewhat modified this morning.

This makes a very curious case, as there was an acute pleural pneumonia, then great dyspnea, and now pneumothorax. This means that the pneumonia must have been followed by a rupture of the lung, as the physical signs admit of no explanation but that of pneumothorax. We have tympany above and dulness below, the amphoric voice sounds, the dilatation of the chest, and the displacement of the heart to the left. Only one physical sign is lacking, that being the presence of succussion sounds; this I explain by the fact that from some cause the pleurisy has become circumscribed, and thus will not give the usual sound.

Recovery is not impossible in such cases, as the opening may gradually close. We hope that such will be the case here, as the symptoms are somewhat milder than they were.

The treatment is to endeavor to modify the dyspnea. In my experience only two remedies are of any good in these cases—cannabis indica and morphine, the latter in doses of one-sixteenth of a grain every three hours. Strychnine may be used as a respiratory stimulant.

The question here arises, Why not resort to surgical interference in such cases? The effusion can easily be let off, and why should not the opening be closed? This treatment is worthy of careful thought, and I have had one or two cases in which I regretted that an operation was not done. However, as a rule the results in operations of this kind are not good. As long as the patient is not getting worse the conservative treatment will generally be found the best. After the air leaves the effusion may be tapped and removed. Early operation, except in cases where there is imminent danger from dyspnea, are not of sufficient success to be indicated. But the question is still

open. Cases of this kind are rare, and experience with them is so limited that we cannot tell absolutely what is the best procedure.

KNEE INVOLVED IN TYPHOID FEVER.

The man of whom I now speak is a soldier from Camp Meade. An interesting point is the enormous temperature sheet showing an attack of fever and four relapses. The man has had typhoid fever beyond all doubt. The relapses have not all been simply those of fever, but there have generally been complications of some kind. Once there was otitis media, and now there is a condition of the right knee that is uncommon in typhoid fever, and it is this to which I desire to direct particular attention. A patient can have many relapses in typhoid fever, one case which I saw in consultation having six, and several having four have come under my observation. In this connection I will state that I have had good results in checking these late fever rises by the hypodermic use of the bimuriate of quinine and urea, ten grains per day.

This knee is swollen, slightly painful, and the tenseness shows the presence of fluid. We have here, then, a subacute synovitis of the knee with no other joint involved. Joint affections in typhoid fever are extremely rare, not more than fifty or fifty-five cases being on record. But we must not think that these are all from the same cause. Some are really rheumatic, or due to a curious form of rheumatism; some (and these are very dangerous) are due to septic influences, and may come from boils, bed-sores, or even from the intestinal ulcers. The peculiarity of them generally, whatever they may be due to, is that a number of joints are affected. Rarely is the condition limited to one joint as in this case. Here there is synovitis without pus, hence from no septic influence. There are no constitutional phenomena, and the patients generally recover. One thing must be borne in mind, and that is that great relaxation is apt to follow these affections. As a result there may be dislocation of the joint. One case puzzled me very much. After typhoid fever there was pain and swelling in the hip-joint; finally spontaneous dislocation occurred. This is to be feared in all cases.

The treatment in this case has been elevation, the application of lead-water and laudanum, and afterward iodine painted on. The man has also been taking as a tonic twenty minims of the tincture of the chloride of iron three times a day. I would also recommend the iodides in these cases, where the digestive powers of the patient are good.

CORRESPONDENCE.

AN OBSTETRICAL CHARM.

To the Editor of THE MEDICAL AGE:

A slight error of typography recurs several times in the old charm as printed on page 61 of the second January number of this journal. For "medicina mei" read "medicina mea," and better sense and better Latin will result.

The so-called charm is of the class of healing agents of the Middle Ages known as "Patters," from the occurrence of "Patris" in the opening benediction, a word generally written in the manuscripts as a rubric—that is to say, in red ink—and on that account most prominent to the eye.

The phrase "Arepo tenet opera rotas" is not complete in this version, and so has none of the virtue which medical men of the time united in ascribing to it, a virtue which the laity accepted as proved. It should be "Sator arepo tenet opera rotas," and when thus written is filled with mystic power. It is a palindrome—that is, it reads exactly the same whether read forward or backward. The virtue of the palindrome was never doubted in the Middle Ages. It is a branch of demonology. In every charm or patter it was obligatory to leave a place for the devil. In the one quoted the devil could not enter on any of the lines of the benediction or of the following Litany of Travail. The sentence "Sator arepo tenet opera rotas" was put in expressly for the Father of Evil. If he entered at the front end of the sentence he was able to steer a straight course as far as the letter "n" in "tenet," which is in the exact center of the sentence; from that point onward he went over the same ground he had already traversed, going back letter by letter in the reverse order, and coming out eventually at the very point at which he entered. This was a practical joke on the devil; he became very angry at the wearer of the charm, but no matter how hard he tried he could never do anything but come out where he went in, and was therefore unable to work any evil. This was one of the largest and most complete of palindromes, but all had the same virtue against the assaults of the devil. The same virtue existed in the blessed medals of the saints who had palindromic names. Saint Anna's medal was a good prophylaxis against the marsh fever, because Anna is the same spelt forward or backward. Even the first mother, Eve, was considered a saint; her medal was a safeguard against the Will-o'-the-Wisp. Long after the therapeutic value had been lost from these sentences palindromes con-

tinued to be made as a sort of exercise of literary ingenuity. This, of the period of Henry VIII., although incomplete in modern spelling, was perfect in the orthography of the period: "Lewd did I live & evil I did dwel." It will be seen that the central point is the ampersand, which must be printed as a single character. Even so recently as our own century there was a famous palindrome on Napoleon: "Able was I ere I saw Elba."

The other mysteries concerning which elucidation is asked are not so easy to explain. It is probable that the real meaning can no longer be discovered. These are the phrases "a. g. l. a.," "bhurnon," and "blictaono." The latter is a typographical error for "blistaono." All three are of frequent recurrence in the Rosicrucian mystic philosophy; they are used repeatedly in the writings of the last of those mystics, the English Rosicrucian Robert Flud, better known in the Low Latin guise of Robertus de Fluctibus. It is manifest from the way in which he uses them that they are intentional blinds to conceal from the uninitiated certain secrets which were communicated only by word of mouth in duly constituted lodges of the Rosy Cross. The three above cited, with a considerable vocabulary of others, fall into two classes: one, of the type of "a. g. l. a.," seems to be the initials of words which form a recognizable sentence well known to the fellow mystics, probably in Latin; the other, of which there are two examples in this patter, consists of apparently arbitrary words, all of which are an effort to betray an acquaintance with the Arabic. Both classes of hiding knowledge were by no means confined to the mystics; they were perfectly ethical in accepted science. Some of the astronomical discoveries of Copernicus and Tycho Brahe were announced in this blind form, and in at least one instance the cipher has resisted every effort to expound it to the present day.

Both of these elements, the palindrome and the meaningless magic word, are found combined in a famous amulet, the "Abracadabra," which is not only palindromic but has added virtue because it is susceptible of inscription in the triangle, itself a form of the Trinity with all its protective power against the devil. Thus:

A B R A C A D A B R A
B R A C A D A B R
R A C A D A B
A C A D A
C A D
A

The true palindrome appears in this in the line "acada" and at the tip of the triangle. Its greatest virtue lay in the fact that the mystic word could be read in a multitude of ways.

B. T. Whitmore, M.D., LL.D.

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A Semi-Monthly Journal of Medicine.

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EDITORIAL ARTICLES.

MEDICAL LEGISLATION IN MICHIGAN.

Another attempt is to be made in the present Legislature to enact some measure of relief for the long-suffering profession in Michigan. The State has long been a Canaan of quackery to which every osteopath, faith-healer, and necromancer has traveled in the hope of finding the milk and honey of the Promised Land. Any attempt to prevent these forms of imposition from being practiced on the public is to be commended, and the medical profession should be prepared to welcome any measure that will do this even though the terms of such measure be not such as they can in all particulars approve.

The essential provisions of the bill now before the Senate and House of Representatives are as follows: It provides that no person shall practice medicine in any of its branches who has not a diploma from a reputable medical school, and who has not a license from an examining board. The examining board shall be appointed by the Board of Regents of the University. This point is the one to which some exception will be taken, as the examining board should be absolutely separate from all connection with teaching bodies. There shall be one examiner in anatomy and physiology, one in surgery and pathology, one in chemistry and bacteriology, one in obstetrics, one in homeopathic materia medica and practice, one in eclectic materia medica and practice, and one in regular materia medica and practice, and such other examiners as the Board of Regents may deem necessary. Each examiner is to examine only in that subject for which he is specifically appointed, and is to report to the Secretary of the Board of Examiners the standing of the applicant, and the Secretary thereupon issues the license or refuses it. The applicant records his license in the office of the County Clerk, and becomes a lawful practitioner of medicine.

The measure in question is similar to that which has proved more or less successful in other States. The experience had with similar enactments elsewhere precludes this one from being considered in the nature of an experiment. The elevation of the practice of medicine in the State from the operation of such an act cannot fail to follow.

In removing a deep-seated vitiation legislative enactment can never perhaps take the place of popular education, but the time is undoubtedly ripe for restricting by penal methods the fraudulent impositions which have been foisted upon the ignorant and practiced upon the unwise. The death of Harold Frederic has led to many lucubrations, the trend of which has been the folly of saving the ignorant from the effects of ignorance and the unwisdom of not making the fool suffer for his folly. "The slaughter of fools" is held to be a not undesirable end to achieve by any means. It is unnecessary to say that this kind of cynicism should not find a place in any humane philosophy. If the ignorant offend, we should accuse ourselves that we have not sufficiently edified him. While not desirous of hindering the attainment of that knowledge which can only be gained by experience, it is certainly the duty of those who have been more happily blessed in intelligence to protect the less fortunate from the schemes of the charlatan and the machinations of the quack.

EDITORIAL NOTES.

Is La Grippe Present?

Have we an epidemic of influenza? The term grippe seems to have a strange attraction for some people, and every febrile catarrh of whatever kind is called la grippe. Gastric cases, headaches, sore throats, coryzas, are all grippe. If Pfeiffer's bacillus be the actual pathological factor in la grippe, it is to be hoped that some ready method of detecting it will be discovered, that this unfortunate diagnosis may be settled.

A New Cure-all.

There have not been wanting symptoms in many of his scientific speculations that Mr. Nicola Tesla is somewhat chimerical in his ideas. One that will not add to his reputation among physicians is his alleged statement that he can cure all sorts of diseases by submitting the patient to electric currents of a million or two volts more or less. What Mr. Tesla wants is a more scientific use of the imagination, and less imaginative use of science.

ITEMS AND NOTES.

NEARLY sixty persons are killed in India by snakes every twenty-four hours.

THE name of the New York Cancer Hospital has been changed to the General Memorial Home.

IT was reported on December 27 that bubonic plague had broken out in the district of Delagoa Bay.

THE Supreme Court of Tennessee has declared that the cigarette is not a legitimate article of commerce.

A MONUMENT to the memory of Guy Patin has been recently erected at the village of Oise, France.

SURGEON-GENERAL STERNBERG left recently for a tour of inspection of the Spanish military hospitals in Cuba.

THE Presbyterian Hospital, of New York, receives a legacy of $5000 by the will of the late Caroline C. Macy.

THE British army service is about to establish a new branch, viz., a class of non-commissioned officers for instruction as chiropodists.

THE treatment of cancer by application of arsenious acid may be rendered painless by adding to the acid an equal amount of orthoform.

UNIVERSITY COLLEGE, Liverpool, England, has opened a school and museum devoted exclusively to the training of sanitary inspectors.

THERE is an attempt being made in New York to give the drug clerk shorter hours and a ventilated bedroom away from the odor of drugs.

THE Italian Government is taking care that bubonic plague is not brought into its boundary, and strict quarantine against this disease is maintained.

AMONG the mayors elected in the principal cities and towns of England and Wales, the second Wednesday of November, there were nineteen medical men.

JAPAN has made not only primary vaccination, but revaccination every five years, compulsory, and ordains the exclusive use of aseptically prepared calf lymph.

That Prince Bismarck was a doctor of medicine may not be generally known. The degree was bestowed upon him—*honoris causa*—by the Jena University late in the seventies.

In a number of Italian towns there has of late broken out psittacosis, the infectious pneumonia spread by parrots. In Genoa and Florence it prevailed extensively some years ago.

A monument to commemorate the late Dr. Henri Feulard, who perished during the fire at the Charity Bazaar in Paris, in 1897, was recently erected in the Hospital St. Louis, in Paris.

New York has a "Hundred Year Club," the object of which is to promote the length of life of its members, who have pledged themselves to live beyond the age of one hundred years.

The following advertisement appeared in the *New York Sun* of a recent date: "Doctors, dentists, pharmacists, lawyers, undergraduates practising; soon graduated home. Box 590, Chicago."

The *Cincinnati Lancet-Clinic* relates the story of an autopsy where a bullet was found in the wall of the heart; it was received in 1861, thirty-seven years ago. The death was occasioned by cancer of the arm.

In the sanatorium in the Adirondacks, kept by Dr. Trudeau, it is claimed that about twenty per cent of phthisical patients are apparently cured, and that in thirty per cent more the disease is more or less arrested.

The new Hospital of the University of Colorado has been completed and dedicated. It is a handsome three-story brick edifice and occupies a commanding site upon the bluff, overlooking the river and city of Boulder.

At Aargan, in Baden, some recent excavations have disclosed an ancient Roman military hospital containing remains of all sorts of medical and pharmaceutical appliances, together with numerous crude surgical appliances.

At a recent autopsy held in Philadelphia the heart was found split in two sections as completely as if a knife had been used to divide it. The cardiac walls were weak, and death was caused by some sudden shock which ruptured them.

"La Société des Amis de l'Universite" was recently founded in Paris. Its object is to aid in the development of the University of Paris, by the founding of new professorships, assisting the laboratories, establishing scholarships, etc.

THE Prussian Minister of the Interior has ordered the police authorities to subject all persons professing to be anarchists to the Bertillon system of measurements, in order to insure their future identification in case of need.

AN enterprising bacteriologist who attempted to bring a lot of cultures of the plague bacillus into Victoria, Australia, had his whole outfit confiscated and destroyed on the plea that it was detrimental to the health of the people of Victoria.

THE Knights of Pythias propose to build a sanitarium at Hot Springs, Ark., at a cost of $500,000, of which $12,000 has been collected. The members of the society in the United States are to be assessed one dollar each for the realization of the project.

GUY'S HOSPITAL has received an anonymous gift of $6000 for the endowment of medical research, as the result of an address by Mr. Balfour, leader of the House of Commons, on the subject of research, on the occasion of the distribution of prizes at the medical school of Guy's Hospital.

OVER $100,000 has been subscribed for the Waring Fund. It will be invested and the income be given to the widow and daughter of the late Colonel George Waring. At their death it will revert to Columbia University to found a professorship to be known as the Waring professorship.

IN Paris in 1900 a "Biological Institute" is to be built next door to the Pasteur Institute. The expense will be covered by a sum of $400,000 recently bequeathed for this purpose. It will contain laboratories, lecture theaters, and a hospital, where diphtheria, lockjaw, and other diseases will be treated on Dr. Roux's system.

THE number of students enrolled at the Medical School in Paris is 4495. The faculty includes 351 male foreign students, of whom sixteen are Swiss, fifteen Germans, sixty Roumanians, sixty-seven Ottomans, and sixty-six Russians. There are also eighty-seven female foreign students, of whom eighty-three are Russians.

THE last survivors of the war for Grecian independence among doctors, Dr. Mavrogenis, has just celebrated his one hundredth birthday. Born at Pasos in 1798, he left his medical studies at an Italian university in 1821 and returned to Greece, where he distinguished himself in many battles, receiving numerous wounds. The doctor is in good health and lives with an elder sister, aged 110 years.

THE death of Professor Laboulbene at the age of seventy-three years is announced. He had held the chair of historical medicine at

the Faculty of Paris since April, 1897; was physician to the hospitals and a member of the Academy of Medicine. His clinical knowledge was unrivaled. He was also an expert naturalist, and could have held a chair of entomology or parasitology with as much distinction as he did that of history of medicine.

A MEDICAL professor quizzing his class of students on the doses of medicine to be given, one student gave the number of grains of a powerful drug for a dose, which was very excessive for the safety limit. The professor said nothing and went on with his questions; but later the student, having collected his thoughts, asked leave to correct his statement as to the dose. The professor, taking out his watch, said, "It is now too late; the patient has been dead fourteen minutes."

THE Russian Government has just forbidden the further sale of a supposed herbal remedy that, owing to extensive advertising, was in wide use among the people. Under the name of "Ephedra Vulgaris" the remedy had hitherto escaped the rigid law against secret remedies in Russia, its title being its true botanical name. A large amount of the stuff ready for shipment was confiscated and proved to be ordinary hay. Pound packages were being sold in large numbers at from three to five rubles ($1.50 to $2.50) per pound.

OKLAHOMA has 63-year-old twin brothers, one of whom is a druggist. There is entertainment in listening to the history of their lives. In their youth they agreed to marry twin sisters, but it chanced that both wanted the same twin girl, so both gave her up and married separate girls in separate States. One raised a family of three boys, the other three girls, and during their rearing the wives and children were frequently at a loss to decide which were their respective husbands and fathers. In this life history there would seem to be good and sufficient material for a modern "Two Dromios" story.

THE *British Medical Journal* is responsible for the following: A poor little street arab was brought into hospital by the police. He had been run over by a 'bus and was badly injured. The chaplain was sent for, as it was thought impossible that the boy could live many hours. With little tact the chaplain began the interview thus: "My boy, the doctors think you are very much hurt. Have you been a good little boy?" Boy (much bored): "You git aout." Chaplain (shocked): "But I am afraid that you are not a good little boy, and you know you may perhaps be going to die." Boy (anxious to end the interview): "Well, 'tain't none o' your business any'ow. Wot's me death got to do with you? 'Ave you got a pal in the coffin line?"

In Germany, according to the *St. Paul Medical Journal*, under an enactment which goes into effect in 1900, the person or persons who have cohabited with the mother of an illegitimate child are made responsible for its support, and are required to pay a certain sum annually toward its maintenance, until the age of fourteen years. The time of cohabitation is fixed between the one hundred and eighty-second and the three hundred and second day. This law has no reference to who is the father of the child, but casts the burden upon all who have been proved to have had intercourse with the woman within the normal period of gestation. If there be more than one the burden is divided between them. The mother retains possession of the child, which, however, may be adopted by the man if he so desires, without the obligation of marrying the mother.

In England the endeavor to stamp out quacks or quackery has never been remarkably successful. Even before the days of Henry VIII. the charter of the Royal College of Physicians of London gave them power to restrain all persons from practicing the faculty of medicine in the city of London or within seven miles thereof without the college license, under a penalty of $25; and by a statute in the reign of Henry VIII., which confirmed this charter, it was further enacted that "No person shall be suffered to exercise or practice in Physick through England without a license from the college, except he be a graduate of Oxford or Cambridge, which hath accomplished all things for his form without any grace;" but it is to be noted that no mention is made of any penalty. Somewhat similar provisions were made as to the practice of surgery, but whether these antiquated statutes could now be enforced is a matter which experience alone can settle.

According to *The Lancet*, a patient was attended two years ago in her confinement by her usual medical attendant, but not recovering in a normal way she underwent an operation performed by a young surgeon who had been a pupil of Péan. The operation seemed to do no good and the patient still kept her bed. Despite the entreaties of the surgeon that she should have a second operation, she would never consent, and fifteen months after the first operation she went into the Hospital of St. Louis, where celiotomy was performed by Dr. Marchand. In the course of this operation a Hegar's dilator (bougie) made of metal was discovered, which had been overlooked by the first operator. Questioned on the matter the young surgeon admitted the facts and added that that was just the reason why he had urged the second operation—namely, to get rid of the dilator. The patient has commenced proceedings against her medical attendants for malpractice.

According to the *British Medical Journal* His Majesty Menelek, Emperor of Abyssinia, who, it is reported, intends to present a paper on Vaccination at the forthcoming International Medical Congress in Paris, is said to take an enthusiastic interest in medical science, particularly in surgery. His favorite amusement, it is reported, is to be present at the operations in the hospital established at Adis-Alala by the Russian Mission. He watches the performance with a critical eye, and a skilful piece of knife-play or a dexterous feat of manipulation excites his warmest admiration. His pleasure rises to the highest pitch when he is given an arm to hold during an amputation, or is otherwise allowed to give active assistance. His delight on such occasions finds vent in rapturous exclamations of "Oyu gut! oyu gut!"—expressions which we give with all reserve, but which are said to mean "Admirable! admirable!" He is careful never to miss any rare or difficult operation, and insists on being kept posted on all that goes on in the hospital.

Some of the difficulties connected with surgical practice are very well illustrated by the following case quoted in the *Aerztliche Sachverstandige Zeitung*. An intoxicated workingman was wounded in the neck in a scuffle and was brought to a surgeon, who dressed the wounds and attended him for ten days in his (the patient's) residence. As the man's state became worse he was taken to a hospital, where paresis of the right arm and motor aphasia were recognized. Seven days after admission trephining was performed and led to the discovery of a broken knife-blade which had perforated the dura mater and was fixed in the skull. Round the blade there was an abscess, which increased in size after the removal of the foreign body and finally led to a fatal issue. The surgeon who had first attended the case was prosecuted for professional neglect, and two other surgeons had to appear as experts before the court. They were asked by the prosecution (1) whether the defendant had sufficiently examined the wounds, and (2) whether if the blade had been at once removed from the skull the patient's life would have been saved. The answers to these questions were as follows: First, that there was no reason to believe that the surgeon had not sufficiently examined the wound, as he had not been informed that a knife had been used in the fight, and that even if he had introduced a probe into the wound there was little probability that the blade would have been detected, as it was inside the skull; secondly, that even if the blade had been removed earlier the patient would probably have died, the knife not being free from pyogenic germs. The court agreed with the opinions of the expert witnesses, and a verdict of "Not guilty" was returned.—*Lancet.*

NEW PUBLICATIONS.

HIRST'S TEXT-BOOK OF OBSTETRICS.

This is a worthy addition to our manuals of obstetrics. The author has had a large clinical experience in maternity hospitals, and has presented the subject in a way which must commend itself to his readers. Those familiar with older standard works upon obstetrics will be struck by many novelties in the illustrations which so admirably elucidate the text in this volume. The author has laid down a stringent but admirable mode of procedure in the conduct of a delivery. No deviation from the strict principles of surgical asepsis are permitted, and the practitioner is made to feel that an obstetrical operation demands all or even more than the care usually devoted to an abdominal operation. The modern spirit which pervades the work is shown in the remarks upon the serum treatment of puerperal disease. The manual is characterized by a clear reasoning, judicious counseling, and a lucid and emphatic style of writing.

A Text-book of Obstetrics. By Barton Cooke Hirst, M.D, Professor of Obstetrics in the University of Pennsylvania. With 653 Illustrations. Philadelphia: W. B. Saunders, 1898.

ELLINGWOOD'S MATERIA MEDICA.

The author of this manual of materia medica has one eminent qualification for a writer on this subject which seems often lacking in those who attempt to deal with the subject of rational therapeutics. Dr. Ellingwood evidently believes in the remedial virtues inherent in the substances used in medicine, and his faith in therapeutics is a refreshing antidote to the debilitating nihilism which has more or less paralyzed this branch of medical science. The classification of remedies adopted in the present work is that based upon physiological and therapeutic action. The descriptions of the agents used in medicine are brief but comprehensive, and particularize all essential facts for the practitioner. In the application of remedies to disease the author particularly excels, displaying a wide range of clinical experience. Few readers will peruse this volume without being reminded of much they should not have forgotten.

A Systematic Treatise on Materia Medica and Therapeutics, with Reference to the Most Direct Action of Drugs. By Finley Ellingwood, M.D., etc. With a Condensed Consideration of Pharmacy and Pharmacognosy. By Prof. John Uri Lloyd, Ph.D. Chicago: Chicago Medical Press Co., 103 State St.

ORGANOTHERAPY OR OPOTHERAPY.

Under this title Dr. Hillemand has discussed fully and frankly the present standing and position of organotherapy in the realm of therapeutics. It is a careful and unprejudiced review of the subject.

Organotherapie ou Opotherapie. Par le Dr. C. Hillemand, Ancien Interne des Hôpitaux de Paris Laureat de la Faculte. Paris: G. Steinheil, 2 Rue Casimir-Delavigne, 1899.

TRANSACTIONS OF THE ROYAL ACADEMY OF MEDICINE IN IRELAND.

This volume of transactions contains the usual number of interesting papers, in addition to a large amount of material especially interesting to the local profession.

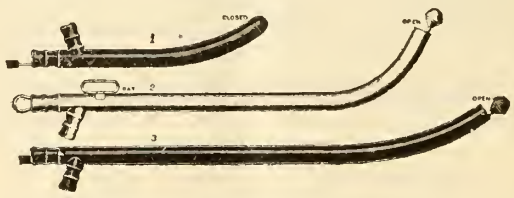
Transactions of the Royal Academy of Medicine in Ireland. Vol. XVI. Edited by John B. Story, M.B., F.R.C.S., General Secretary; Surgeon to St. Mark's Ophthalmic Hospital, Dublin. Fannin & Co., Ltd., 41 Grafton St., Dublin; Bailliere, Tindall & Cox, London; James Thin, Edinburgh; John Wright & Co., Bristol. 1898.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Catheters and Cystitis.

Dr. R. N. Mayfield (*New York Medical Journal*, Sept. 13, 1898) describes a new catheter for the purpose of irrigating the bladder in cystitis. The catheter is of simple construction, being tubular, with



the curve of an ordinary instrument, and opened at the end for an inlet. For the closure of this open end, and for the easy insertion of the catheter, as well as for other purposes, a bulbous or rounded head is used, preferably solid, and attached to one end of a wire, passing through the body or tube and projecting at its rear or outlet end. Its interior may be made aseptic, and bits of mucus that usually clog an ordinary catheter may be readily drawn off.

Dr. Mayfield says that with this instrument there should be no hesitancy in using nitrate of silver, iodine, corrosive sublimate, carbolic acid, or hydrogen solutions in the bladder, as any of these solutions can be readily drawn off or neutralized, thus preventing poisoning from absorption, or rupture from gases that form in the bladder.

Regarding the treatment of cystitis with the employment of this catheter, presuming that we have a typical case, with ropy, viscid, and tenacious mucus, the membrane thickened and possibly ulcerated, and in deep folds—"ribbed," as it were—we begin the treatment as follows:

1. Inject a quarter of a grain of cocaine dissolved in a drachm of water into the membranous portion of the urethra.

2. Anoint the largest hard-rubber catheter that can be well passed into the bladder, and increase the size one number each week until the urethra is normal in size.

3. Begin with dilute hydrogen solutions—preferably hydrozone—one part to twenty of lukewarm water, using this solution freely, especially when employing the large size catheter. If the small size is

used at the beginning, Mayfield recommends the use of only two or three ounces at a time until removed by the return flow. This can be repeated until the return flow is clear and not "foaming," which indicates that the bladder is aseptic.

4. Partly fill the bladder with the following solution: tincture of iodine compound, two drachms; chlorate of potassium, half a drachm; chloride of sodium, two drachms; warm water, eight ounces. Let it remain a minute or so and then remove. This treatment should be used once or twice a day.

When he suspects extensive ulceration Mayfield recommends once a week the use of from ten to twenty grains of nitrate of silver to the ounce, and neutralize with the chloride of sodium solutions.

This treatment carried out carefully will be satisfactory, as there is no remedy that will destroy bacteria, fetid mucus, or sacculated deposits like hydrogen.

The Question of What Produces, and What Prevents, Ankylosis of Joints.

A. M. Phelps, in the January number of the *Railway Surgeon*, having made a large number of experiments on dogs to determine what produces and what prevents ankylosis of joints, arrives at the following conclusions:

1. That a normal joint will not become ankylosed by simply immobilizing it for five months.

2. That motion is not necessary to preserve the normal histological character of a joint.

3. That when a healthy joint becomes ankylosed or its normal histological character changed, it is not due to prolonged rest, but to pathological causes.

4. That immobilizing a joint in such a manner as to produce and continue intra-articular pressure will result in destruction of the head of the bone and the socket against which it presses.

5. That atrophy of the muscles of the limb will follow prolonged immobilization of a joint.

Behavior of Certain Malignant and Innocent Growths.

W. H. Bennett, in *The Lancet* of January 7, 1899, after a careful study of a considerable number of cases, draws the following conclusions: (1) That certain tumors, although undoubtedly malignant in structure, pursue an innocent course and disappear spontaneously. (2) That certain tumors malignant in structure become quiescent, assuming a condition of negative malignancy. (3) That some tumors

originally innocent in type pursue a course of extreme malignancy. (4) That microscopical examination in a certain percentage of cases is powerless to determine whether a growth will prove malignant or innocent in its course. (5) That the clinical behavior of new growths is often a better test of malignancy than microscopical examination. (6) That mental concentration on the part of the patient upon the site of the disease is a distinct factor in stimulating the growth of innocent tumors and in the production of malignant disease in certain susceptible subjects. (7) That in nervous subjects of the type described recurrence of malignant disease after operation is more certain, and its growth more certain, than in persons of a placid or apathetic disposition. (8) That evidence is wanting to show that operation in cancerous tumors of the breast which have assumed the condition of negative malignancy is as a rule necessary or advantageous. (9) That although the practice of candidly announcing to patients suffering from malignant disease the nature of their complaint is, speaking generally, moral and salutary, it may be modified with advantage in patients of the nervous type already indicated.

Inflammatory Tumors of the Submaxillary Salivary Glands.

Kuettner, of Tübingen (*Archiv für Klin. Chirurgie*, Bd. 57, Heft 4), has observed only five cases with these tumors. He says the tumor resembles that reported by Riedel as a chronic inflammation of the head of the pancreas. The tumor, situated in the submaxillary glands, is hard, slightly movable, and the size of a hen's egg or an apple, with the appearance of a true malignant tumor. At first it is sensitive to pressure, but later becomes painless. Swallowing is difficult, and sometimes the speech is impaired. The extirpation of the tumor is not always easy.

Microscopically there is an increase of connective tissue and a large amount of small-cell infiltration without the slightest sign of malignant degeneration. Etiologically it must be attributed to an inflammatory process in the oral cavity. There seems to be no retrogressive metamorphosis, but rather a propensity on the part of the tumor to further extension.

Causes of Priapism.

W. R. Taylor, in the *Medical Record*, gives the following causes of this condition: (1) Reflex in infants from long, tight, adherent prepuce, stone in bladder or prostatic urethra, and rectal worms. (2) Reflex in adults from stone, stricture, or cystitis with retention. (3)

Gonorrheal form, which is painful and transitory, usually nocturnal, and often with downward curvature. (4) Cantharidal variety, seldom seen. (5) Essential form, caused by injury to the spinal cord or perineum, cerebral or descending spinal cord disease, alcoholic or sexual excess, or leucemia.

MEDICINE.

Intermittent Hydronephrosis.

At a recent meeting of the Société de Chirurgie (*Medical Press and Circular*, Jan. 4, 1899) M. Bourcy spoke on the case of a woman, aged sixty-two, who for many years suffered periodically from severe pain over the left renal region, radiating towards the left groin, and accompanied by vomiting and a sudden cessation of the urine. After one or two days the pain disappeared, and the flow of urine returned with more or less abundance. Several times gravel was found in small quantities. The symptoms were evidently those of renal colic. However, three years ago matters took another turn: instead of subsiding in one or two days, the pain persisted, the urine remaining very scarce, while the abdomen increased in size, especially towards the left side, where an unbearable sensation of tension and fulness was felt; and the vomiting as well as the headache continued. In this condition the patient applied to one of the hospitals, where she generally got relief by having the tumor tapped. Recently she came under the care of M. Bourcy, who, on learning the history of the case, had no difficulty in pronouncing it to be a case of intermittent hydronephrosis. At the time of entry she had already been suffering four days; the whole left side seemed to be the seat of a large fluctuating tumor, while the urinary secretion was reduced to almost suppression. By means of a Potain trocar he drew off over a quart of liquid containing all the elements of urine. As in former operations relief was immediate, but M. Bourcy believed that if the symptoms returned in a short time ablation of the kidney should be practiced.

On Nephritis of Malarial Origin.

W. S. Thayer, in the December number of the *American Journal of Medical Sciences*, contributes a very interesting article on the subject, and from an experience based upon a large number of cases draws the following conclusions:

1. Albuminuria is a frequent occurrence in the malarial fevers of Baltimore, occurring in 46.4 per cent of cases.

2. It is considerably more frequent in estivo-autumnal infections

than in other forms, occurring in 58.3 per cent of these instances against 38.6 per cent in the regularly intermittent fevers.

3. Acute nephritis is a not unusual complication of malarial fever, having occurred in 2.7 per cent of the cases treated in the wards of the Johns Hopkins Hospital, and in between one and two per cent of all cases seen at the institution.

4. The frequency of acute nephritis in estivo-autumnal fever is much greater than in the regularly intermittent fevers, having been observed in 4.7 per cent of the cases treated in the wards, and in 2.3 per cent of all the cases seen.

5. The frequency of albuminuria and nephritis in malarial fever, while somewhat below that observed in the more severe acute infections, such as typhoid fever, scarlet fever, and diphtheria, is yet considerable.

6. There is reason to believe that malarial infection, especially in the more tropical countries, may play an appreciable part in the etiology of chronic renal disease.

The Medico-legal Aspects of Hypnotism.

Sydney Kuh, M.D., in the December number of the *American Journal of the Medical Sciences*, says that if we acknowledge the possibility that a person may be caused to commit a crime by hypnotization, then such a person must be considered irresponsible for his actions, for hypnotism is a pathological state in which the will power of the subject is affected to a greater or less extent. If this paralysis of the will reaches such a degree as to overcome the natural and inborn resistance of a normal and moral person to crime, then such a person could no more be held responsible than any other mentally deranged individual who commits some impulsive criminal act. Whether the power of inhibition is ever totally destroyed in the hypnotized is something to which there can be no positive answer to-day. Experiment has demonstrated that such is but rarely the case; at any rate the evidence is overwhelmingly in favor of the view that hypnotism is of practically no use in the commission of crime.

In concluding his essay the writer says that the dangers of hypnotism lie much more in its use for experimental and therapeutical than for criminal purposes.

Arterial Sclerosis.

Two important and almost pathognomonic signs of hypertension of the arteries are, according to Professor Huchard (*Medical Press and Circular*, Jan. 4, 1899), diastolic sonorous bruit heard at the base of

the heart and on the right side of the sternum—that is to say, over the aorta—and the stability of the pulse regardless of position. In the normal state the pulse diminishes by six to eight beats in the horizontal position of ordinary individuals; where sclerosis of the arteries is present the pulsation remains the same as in the vertical position. The treatment should take into account the cause and the effect of the hypertension. For the former he prescribes a rigorous diet composed chiefly of milk and other diuretics with a little white meal, and for the latter trinitrine, as follows:

Solution of trinitrine..... 40 drops.
Water..... 10 ounces.

A tablespoonful every three or four hours.

Besides this treatment he orders baths, massage, dry frictions, etc.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Bacillus Dysenteriæ.

Dr. K. Shiga, of Tokyo, makes an exhaustive report of his work upon the dysentery bacillus in the *Centralblatt für Bakteriologie*, etc., December 15, 19, and 23, 1898. In Japan, every year from June to December, they have an epidemic of dysentery; last year nearly 90,000 were stricken with the disease, of which twenty-four per cent died. Shiga had an abundance of material, but confined his investigations to thirty-six cases in order that his researches might be exact and complete. The results of his labor he sums up as follows:

1. The same bacillus was found in the dejections of thirty-four cases of dysentery, and also in the intestinal walls and mesenteric glands of two cases which died.

2. The bacillus was found in all his dysentery patients, but never in patients with other diseases, or in well persons.

3. The bacilli exhibited a marked agglutination with the blood-serum of the dysentery patients.

4. The bacilli failed to agglutinate in the serum of other patients, healthy persons, or those injected with the different antitoxic sera.

5. Of all the microorganisms found in the dejections or in the intestinal walls of dysentery patients, this bacillus alone agglutinated in the serum of these patients.

6. When a pure culture was injected into the peritoneal cavity of a guinea-pig there occurred an extravasation of blood or hemorrhages

in the intestinal wall so that the stools had a bloody color. When a pure culture was placed in the stomach of a young dog or a cat, the animal after a day or two had a watery, slimy diarrhea.

7. A small amount of sterilized culture injected subcutaneously produced considerable local and general reaction similar to that observed in the severe cases of dysentery.

8. It is evident the bacillus dysenteriæ is a factor of the dysentery, and he believes it can be accepted as the cause of the disease.

9. With Kolle's method immunization is attainable.

10. An antitoxin will certainly be produced.

The Blood in Scarlet Fever.

Van den Berg, in the *Archiv für Kinderheilkunde*, Bd. 22, Heft 5 u. 6, found in his scarlet fever patients, except the suckling babes, a constant increase of leucocytes in the blood; the intensity, duration, and cessation of the hyperleucocytosis gave no clew to the clinical course. The erythrocytes seemed increased during the fever; the amount of hemoglobin was not constant, sometimes increased, sometimes diminished; the specific gravity of the blood was especially low when complicated with nephritis. The hyperleucocytosis was principally due to an increase of polynuclear cells.

THERAPEUTICS.

Thyroid Gland for Obesity.

Weiss (*Wiener Medicinische Wochenschrift*, No. 41, 1898), referring to obesity treated with the above preparations, says that only during late years has the existence been allowed of a property in the thyroid glands which, beyond its specific action upon certain pathological conditions, claims also the power of so stimulating the oxidation qualities in the body that it produces pronounced decrease of fat, and in consequence diminution of weight. The complaints against the treatment of obesity with thyroid gland preparations have been loud and numerous on account of certain unpleasant and dangerous phenomena of the nervous system in the region of the heart which accompanied its administration. Weiss contends that although unpleasant results may have been obtained, he considers them entirely due to improper application of the preparation. He himself treated three cases, all productive of positive results, nor were any unfavorable phenomena noticeable, decrease of weight following increased water excretion through the urethra. The thyroid gland preparation is described by Weiss as almost positively effective and as one which

responds to every call which can be made upon any natural cure for obesity, viz., decrease of albumen, increase of heart power, and general improvement.

The Topical Use of Quinine in Leucorrhea.

W. W. Hardwicke, in *The Lancet* of January 7, 1899, says that some time ago he accidentally learned that quinine was a valuable agent in this affection, and has since used quinine topically in several cases of simple leucorrhea, and in every case with great success—in fact, he does not know of a single instance in which it has failed or in which quininism has been produced. It may be used in the form of douche or suppository. He adopts the latter form as being obviously the better one, the drug having a better chance of closer and more continuous contact with the congested membrane, and prescribes three grains of the hydrobromate in a half-drachm suppository in combination with oleum theobromatis; but the pessus quininæ of the "Extra Pharmacopœia" containing the hydrochloride answers just as well. One insertion a day is generally sufficient, a good result being very soon manifest.

It is a matter of astonishment that quinine in the form of pessary has never been used before in the treatment of leucorrhea and ulceration, for its valuable properties—tonic, astringent, and antipyretic—suggest it as a useful remedy in such cases, but the writer can find no record of such in any of the well known works on the subject.

The Efficacy of Guaiacol in the Treatment of Epididymitis.

J. C. Perry, in the *Medical Record* of January 7, 1899, in using guaiacol in the treatment of epididymitis, says his method is to apply one cubic centimeter of pure guaiacol over the cord of the affected side as it lies in the inguinal canal, and to paint the scrotum over the inflamed epididymis with two cubic centimeters of a mixture containing one part of guaiacol and two of glycerin. This, says the author, does not produce much burning, and although some peeling of the skin of the scrotum occurs, it seldom causes discomfort. Two applications are made during the day—one in the morning, the other in the evening—but if the attack is very severe, a third is used on the first day of treatment. The writer's experience has taught him that four or five applications are sufficient to effect a cure in the same number of days, and that a liberal use of this agent will often abort an attack of epididymitis when it is seen in its commencement.

In the chronic form of the trouble guaiacol has no appreciable effect.

The Effect of Glauber Salt upon the Stomach Functions.

Simon (*Zeitschrift für Klinische Medicin*, vol. xxxv, No. 3, u. 4), having systematically studied the effect of Glauber salt in cases of stomach ailments, finds that sodium sulphate in daily doses of fifteen grains produces a stimulating effect on the stomach and intestinal peristalsis, which is preceded by such symptoms as restlessness in the abdomen, borborygmus, etc. Its administration is very favorable in cases of anacidity and mucous catarrh, but is not usually to be recommended in cases of atrophic stomach catarrh, systematic anacidity, dilatations, and lesions of motility. No result occurred in the treatment of nervous indigestion without local changes, or hyperacidity. The chemical qualities of the gastric juices were only affected in cases of gastritis, and then in the form of increased acidity. In no case had diminution of acidity been noticed. The author remarks, in conclusion, that the analogy between sodium sulphate, the Karlsbad Thermalwasser, and the Karlsbad Quelle salts is evident, only that in antithesis to these latter it does not reduce the hyperacidity of the gastric juices.

Orthoform in Toothache.

Dr. Hildebrandt (*Medical Press and Circular*) asserts that orthoform causes to cease completely the violent pain due to inflammation of the pulp of a decayed tooth. To this end it is sufficient to introduce into the cavity of the tooth a plug of cotton steeped in an alcoholic solution of orthoform. The pain instantly disappears, and for a considerable time. Being absolutely deprived of any toxic properties, orthoform constitutes in such cases a simple remedy, and one which the patient can apply himself without danger.

PEDIATRICS.

UNDER THE DIRECTION OF CHARLES G. JENNINGS, M.D.,

Professor of Practice of Medicine and Clinical Diseases of Children, Detroit College Medicine.

Infantile Urethritis.

Professor Imerwot-Jassy, in the *Archiv für Kinderheilkunde*, Bd. 22, Heft 5 u. 6, says that a large majority of the purulent urethritis met with in boys, which has been considered as catarrhal, is true gonorrhea. In ten cases between the ages of one and a half and eleven years gonococci, as well as the source of infection, were demonstrable. One case was complicated with epididymitis, and others

became chronic in character. The treatment is the same as in adults (injections, etc.), but prophylactic measures are of the greatest value where members of the household, as the mother, sisters, or maids, are afflicted with leucorrhea.

Tuberculosis of the Kidney.

Friedjung, in the *Archiv für Kinderheilkunde*, Bd. 22, Heft 5 u. 6, reports an interesting autopsy where, in addition to tuberculosis of the spine, the disease had invaded the kidneys and ureters. This is accounted for by the child having had scarlet fever with nephriits two years previously, leaving the kidneys predisposed for tuberculosis.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Epithelioma of the Pharynx.

Dr. Cecil E. Shaw (*Journal of Laryngology*, September, 1898) has reported a rare case of epithelioma of the pharynx. The patient was a fairly healthy married woman about thirty-eight years of age, with a good family history. In March, 1897, she began to feel some slight sore throat. By the end of April her voice became hoarse, and she began to experience difficulty in swallowing. There was no loss of flesh and no pain at any time.

On examination the pharynx was seen to be dry and dirty, and the laryngeal mirror revealed a swelling about the size of a nut on the posterior wall of the pharynx, directly behind the epiglottis, which it touched, and at the top the swelling was ulcerated at the point which came in contact with the epiglottis. No enlarged glands could be found in the throat or externally in the neck. Owing to the size and nature of the growth operative interference was out of the question. The patient gradually grew weaker, and died in July, five months after the growth was first noticed.

Malignant growths of the pharynx are rare, the least rare form being sarcoma of the tonsils, and no record was found of a malignant tumor on the posterior wall. McBride reports a case of epithelioma of the posterior pillars of the fauces in a woman, and Hill reports a similar growth in the glossoepiglottic fold in a man. Tilly recorded a tumor of the posterior wall of the pharynx just opposite the epiglottis, but there was a syphilitic history, and the tumor disappeared in a fortnight under specific treatment, while in Dr. Shaw's case specific treatment had no effect.

Asepsis in Laryngology and Otology.

Dr. McKee (*Laryngoscope*, May, 1898) makes the following practical suggestions regarding asepsis in office and clinic work:

1. To sterilize cutting instruments, place in two and a half per cent carbolic acid solution for fifteen to twenty minutes, and then dip for a few seconds in boiling water.

2. To sterilize trays, dishes for instruments, etc, pour over them a few drops of alcohol and ignite.

3. To sterilize blunt instruments (forceps, spatulæ, etc.), pass through a spirit lamp.

4. To sterilize catheters, antrum cannulæ, etc., boil for a few minutes in a porcelain-lined dish.

5. To sterilize cotton pledgets for wiping out the ear, dip the cotton-wound probe into a saturated alcoholic solution of boracic acid, ignite it, and allow it to burn for a few seconds, extinguishing before the cotton is charred.

6. To preserve needles, keep in pure lysol.

These hints carefully followed will make an excellent working formula for every-day use.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Syphilitic Disease of the Eye.

At the December meeting of the San Francisco eye, ear, nose, and throat surgeons, Dr. Barkan (*Journal of the American Medical Association*) presented an unusually interesting case of syphilitic disease. The patient was a woman of about twenty-five years of age, three months married. The husband had been treated for syphilitic disease of the eye several years before; it was not known whether there had been illicit intercourse between the two prior to marriage or not. The family history of the patient was negative. No history of any trouble that would tend to point to congenital syphilis could be elicited. The right eye was the seat of syphilitic gummata of the iris, so stated Dr. Barkan, with plastic exudate that could be plainly seen on examination by the members of the Society. The lumpy appearance of the iris was also quite visible, but the fact was pointed out by Dr. Martin that these lesions of the iris were of the nature of papillomata rather than gummata. The left eye showed a very unusual condition. In the median line of the eye and immediately below the margin of the

cornea, slightly encroaching upon the cornea itself, a large mass was to be seen. The conjunctiva was greatly congested. The mass was about the size of a small hazelnut, somewhat larger in its transverse than in its longitudinal dimension. At the top of the tumor was a small grayish spot which Dr. Barkan said had developed within the last few days; this was apparently the commencement of a sloughing process. On the forehead, just above the inner angle of the right eye, was a large dry scab surrounding a deep pit, also dry. On the forearms were four large round scabs covering ulcerating areas, two on each forearm, the arrangement being symmetric on the two forearms. These areas were about five-eighths of an inch in diameter. On the back were several more sores of the same general size and character, and on the right leg was another similar sore. On the right tibia, at the upper end of the lower third, was a very marked gumma, about two to three inches in diameter, and very hard. It seemed to be a well-marked case of tertiary syphilide.

Some discussion arose as to the probable seat of the gumma of the left eye. The question as to whether it was situated in the tissues immediately below the conjunctiva, or whether it was a gumma of the uveal body which had grown upward and outward, was discussed at some length. No definite conclusion was arrived at, however.

In the matter of treatment, also, some difference of opinion was called forth. Dr. Barkan stated that the treatment he was now giving the patient consisted of inunctions of mercurial ointment together with twenty grains of iodide of potassium three times daily. He also stated that he should increase the iodide up to thirty grains three times daily. The advisability of giving very much larger doses of the iodide was suggested by several members, who stated that their experience led them to use doses as high as 100 to 150 grains three times daily. By other members it was claimed that a maximum effect could be obtained with very much smaller doses — 20 to 30 grains three times daily. The prognosis, it was agreed, was bad; the probabilities being that the left eye would slough before the iodide or other treatment could be made to have its proper effect.

Retinal and Labyrinthine Hemorrhages in a Case of Splenic Leucemia.

James Finlayson (*British Medical Journal*) reports the case of a married woman, aged twenty-nine years, suffering from splenic leucemia, who contracted a "cold" which was followed by a suddenly developed ringing sound in the ears, giddiness, and nausea, accompanied by a bloodshot appearance of the left eye. There was a decided

conjunctival ecchymosis, and an examination of the fundus showed the presence of hemorrhages. The ears presented no evidences of anything abnormal in the external and middle ear, and the Eustachian tubes were easily inflated, though without improvement in the hearing. The suddenness of the onset, with the symptoms of giddiness, etc., led to a diagnosis of hemorrhagic exudation into the cavities of the labyrinth. Post-mortem sections of the retina showed the hemorrhages noted during life, with a striking abundance of leucocytes in the blood-vessels. Examination of the internal ear revealed hemorrhages in the vestibule and in the first turn of the cochlea.

Congenital Absence of Both Eyes.

Guerrant (*Archives of Pediatrics*) reports the case of a primipara at full term who gave birth to a male child with congenital absence of both eyes. There was no trace of globe in either orbit. The orbital fissures were about one-fourth inch in length. There was no orbital enormity, and the forehead was not high. In other ways the child was normally developed.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Dermatitis Produced by Boric Acid and Borax.

R. B. Wild in *The Lancet* of January 7, 1899, in recording a case of intoxication from the use of boracic acid, says: "The affected skin was of a bright red color and covered with profuse scales of a slightly greasy character. The patches of disease were irregular in shape, roughly symmetrical in distribution, and very extensive in area, leaving smaller patches of healthy skin on the trunk and the proximal parts of the limbs. The hands and the forearms and the feet and the legs below the knees were uniformly red, scaly, swollen, and they pitted on pressure. Desquamation on the palms and soles occurred in large flakes. The scalp was red and scaly; the hair had almost entirely disappeared from the head, and was very thin on the face and pubes. The face presented only a few scaly papules. Digestion was disturbed, the appetite was poor, and there was marked debility and anemia with loss of flesh."

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ORIGINAL CONTRIBUTIONS.

ACTIVE CONSERVATISM IN THE TREATMENT OF FIBROID TUMORS OF THE UTERUS.*

BY W. P. MANTON, M.D., DETROIT.

Progress in every division of science to its remotest ramification is measured by the recorded knowledge of each succeeding generation.

In 1762 William Hunter, while of the opinion "that excision can hardly be attempted" in the treatment of ovarian dropsy, admitted that, in desperate cases, an opening might be made through the belly wall large enough to "admit two fingers or so," the cyst tapped, withdrawn, and cut away. But with all his wonderful knowledge of the human body and his skill, Hunter never essayed to do the operation, because in his time, and for long years after the days of Ephraim McDowell, the abdominal cavity existed as a surgical fetish—to be respected as pregnant with mystery and wisely let alone.

The collected evidence of competent observers from all parts of the world, however, long ago demonstrated that, under proper conditions, the peritoneal sac may be safely invaded, diseased organs and parts removed, and life still continue and health be restored. The development of this fact gave impetus along all lines of surgical possibility; radicalism began its aggressive sway; each organ of the body was assailed in turn with increasing boldness; and total ablation was practiced for most trifling causes. Sometimes some of us looking back upon these things are stirred with feelings of wonder and amazement; but the knowledge of structure, the tolerance of organs

* Read before the Detroit Academy of Medicine.

to manipulation, and improved technique gained through these uncompromising measures, have led to greater perfection in methods and increased resource for combating disease. To-day modern surgery distinctly tends toward reconstruction and repair rather than to mutilation and extinction; but radicalism has served a good purpose and made such things possible.

In no department of abdomino-pelvic surgery does active conservatism promise greater success or more satisfactory results than in the treatment of uterine fibroids. In a large percentage of such cases the new growths are more or less isolated in the uterine tissues and admit of ready attack through either the vagino-uterine canal or by way of the abdomen; and a resort to total ablation of the womb under such conditions is not only unjustifiable but is evidence of bad surgical judgment. By morcellation and myomectomy only the adventitious growths are sought to be removed, while the uterus itself is put in such condition as to again resume its natural functions. That such procedure has great advantage over hysterectomy must be evident, for if it is conceded that the uterus has a place in the normal working of the economy, it must also at once become apparent that total ablation of the organ inevitably exerts a crippling influence and gives rise to loss of somatic power in some degree.

While it is not always possible to determine with absolute accuracy beforehand the extent of uterine involvement in all cases of fibroid development, the surgeon should constantly keep in mind the possibilities of active conservative treatment, and only in certain instances where this is applicable should it be discarded for the radical operation. In the hands of the experienced abdominal and pelvic surgeon these procedures are safe, although not always easy of execution; but, as has been well said, "an inexperienced, indifferent operator, and one whose technique is slipshod, will inevitably lose many cases from hemorrhage and sepsis. Under such circumstances the conservative myomectomy is a far more dangerous operation than the more radical hysteromyomectomy." In selecting myomectomy the age of the patient should always be accorded due importance, the young and fertile especially being given the benefits of the operation and the conservation of the uterus and its adnexa. Regarding the size of the growth which may contraindicate myomectomy, the dictum of those who say that when the fibroid uterus has reached the size of a six months pregnancy hysterectomy, and not myomectomy, is indicated may, in the light of our present knowledge, be a safe and satisfactory rule to follow; but I predict that, in the not distant future, experience will greatly extend this limit, and results will warrant so doing.

For convenience of description, fibroid tumors of the uterus have been classified according to their location, as submucous when the growth presents towards the cavity of the womb; interstitial or intramural when it is located in the substance of the uterine walls; and subserous when development is from the peritoneal side of the organ.

The surgical removal of the first variety through the natural channels is only possible in the presence of a sufficiently expanded vagina and dilated cervix to permit ready access to the cavity of the womb. Under such conditions the operator seizes the mucosa overlying the tumor with vulsellum forceps, makes traction, and with the aid of curved, blunt-pointed scissors gradually cuts through the tumor capsule and enucleates the growth from its surrounding wall of healthy tissue. The carrying out of this procedure demands considerable knowledge of the structures involved and great nicety of touch, for it is easy to cut too much and include the uterine substance in the parts removed, or go too far and penetrate into the peritoneal cavity — both of which accidents might lead to serious consequences.

The following case will serve to illustrate this class of growths:

Widow; aged forty-two years. Referred to me in 1891 by Dr. A. W. Imrie. At this time she was suffering from a mild pelvic peritonitis. Uterus considerably enlarged; ovaries enlarged, tender and prolapsed. Her condition was such as to incapacitate her for work, and after several weeks of unsuccessful treatment I removed the ovaries and tubes of both sides. An excellent recovery followed, and the patient continued well for some time. Then metrorrhagia gradually developed, and this so greatly annoyed and weakened her that in June, 1892, I did a thorough curettage of the uterus. Improvement followed, but the condition returning, curettage was again resorted to in 1893 and 1894. During all this time the patient lost a large amount of blood, but bravely continued at her occupation of nursing, although many times physically unfit for duty. Following the last curettage there was great pain and intermittent contractions of the uterus, accompanied by a thick, stinking mucous discharge. Examination revealed the presence of a sloughing fibroid, a portion of which, about the size of a pullet's egg, was removed. The condition of the patient becoming somewhat serious from the development of septic symptoms, she was sent to Harper Hospital, where, on January 3, 1895, I operated through the dilated cervical canal and removed a submucous and an intramural fibroid, the combined size of which was that of the two fists. The sloughing tumor was easily cut away; the removal of the second growth, deeply embedded in the

uterine substance, presented some little difficulty, but was finally accomplished by morcellation. The patient made a good recovery and has remained well ever since.

Although I have operated upon a number of cases of similar character, I introduce this one as illustrating a point of some little interest. The fibroids in this instance were both originally of the intramural type, and small, but took on a comparatively rapid growth following extirpation of the ovaries, and the innermost tumor forcing toward the uterine cavity gave rise to the profuse hemorrhages from which the patient suffered. The repeated curettements had the effect of weakening the uterine wall in front of the innermost growth, and resulted in more rapid extrusion and eventually in sloughing.

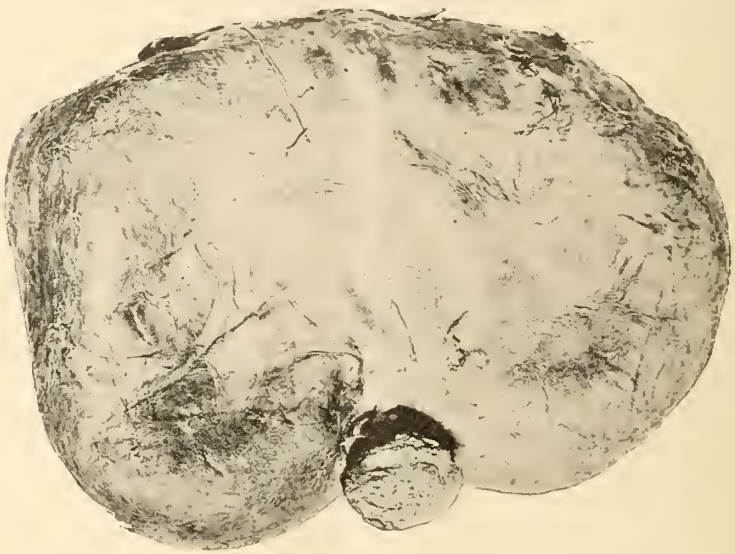

FIG. 1.

I have found in several instances that small intramural fibroids may be successfully removed through the uterovaginal canal, although generally their extirpation is much easier and safer by the abdominal route. In operating from above it is necessary to split the uterus down to the fibroid, which is then enucleated, and the wound united by the absorbable tier suture. I have done this a number of times and have as yet met with no untoward consequences. A case of this kind will be cited.

Subserous fibroids differ greatly in regard to their uterine attach-

ment, some being deeply embedded in the musculature and presenting only a rounded surface toward the peritoneal cavity; some are broadly sessile—that is, there is no true pedicle, the tumor being continuous with the uterine fundus or body—while others have a long or short and narrow pedicle which often permits of their "floating" in the abdominal space. Fig. 1 exhibits an example of the thin-pedicle variety, the stump in this instance measuring only three-fourths of an inch, the tumor weighing about three pounds. I have several times removed large fibroids having broad and thick pedicles. These usually spring from one uterine horn. In these operations, after cutting through the abdominal wall, the tumor is lifted and supported by an assistant, and

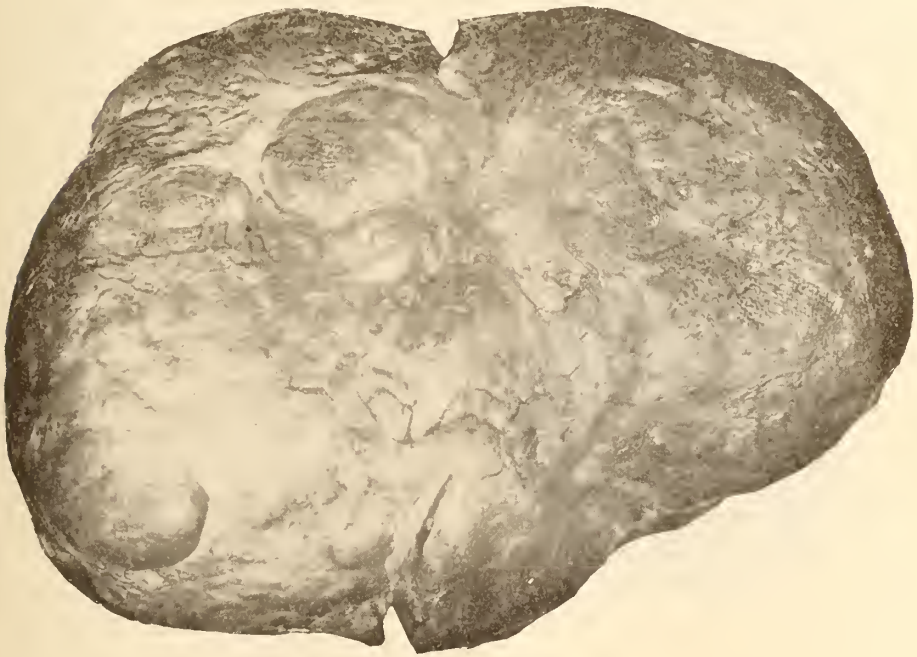

FIG. 2.

the pedicle cut through by a wedge-shaped incision which penetrates into the uterine substance. The wound is then closed by an absorbable tier suture, especial care being taken to unite the peritoneum firmly over all. The hemorrhage in these cases may be considerable, but under proper management it rarely becomes serious. Fig. 2 is an example of the broad-pedicle kind, the attachment being quite as thick as the uterine fundus from which it sprang. The stump in this case

measured two inches, the tumor weighing four pounds. The history of the case is as follows:

Patient, a domestic, aged thirty-seven, single, was referred to me by Dr. H. A. Cleland in 1896. Menstruation began at sixteen; is regular, lasts three days, is moderate in amount, and occasions no pain. The patient complained only of "lump in my stomach." Examination showed the presence of a solid tumor extending upward to the left to within one inch of the umbilicus. The growth was smooth, and not sensitive, except at a single point midway on the left side. The patient was advised to wait until the tumor occasioned pain or inconvenience. She returned in 1898 with the request that the tumor be removed, as it interfered with her work, and when pressed upon by the wash-board was painful. Operation at Harper Hospital March 26, 1898. The growth was removed by the wedge-shaped incision mentioned, and another smaller tumor, the size of a green gage plum, lower down in the uterine wall, was enucleated. Recovery followed. The postoperative temperature never exceeded 99.6°, or the pulse-rate 90. Menstruation returned without disturbance eighteen days after the operation. She remains well and continues to do her regular work, including the family washing.

FIG. 3.

In the multiple fibroid condition each growth receives attention in turn; the capsule surrounding the fibroid is incised, the tumor enucleated, and the cavity sewed up as already described.

A case of this kind was operated on at the hospital December 21 of last year. Three fibroids were present; one, the largest, situated at the left uterine horn just below the entrance of the tube; another further down on the dorsum of the organ; while the third, which could be distinctly felt by holding the uterus between the fingers, was interstitial. The two external growths were enucleated, and the uterus was then split and the remaining growth taken from its nest. Fig. 3 shows the growths after removal. The patient made a good recovery.

The largest number of fibroids which I have removed from a single uterus is nine.

This patient, aged fifty years, married, the mother of one child, was referred by Dr. H. A. Cleland. Menstruation began at thirteen, but when I saw her she was passing through the climacteric and flowing profusely every three months. There was a sore spot at the coccyx which rendered sitting painful; she had some leucorrhea, was very nervous, and felt generally miserable. She had been treated with pessaries for retroversion. Examination revealed an enlarged, retroverted, and very sensitive uterus, the cavity measuring 3⅝ inches. The cervix was high up under the pubis, and slightly lacerated. The ovaries and tubes were normal. At the operation nine fibroids varying in size from a mandarin orange to a pea were enucleated, and the uterus held in position by ventral fixation. Following the operation the temperature did not go higher than 99.6°, but the pulse was erratic, ranging from 88 to 104. The patient has since improved in general health, put on flesh, and considers herself well. Fig. 4 shows this collection of fibroids after transferring from the woman's abdomen to a glass jar. The photograph does not do them justice, as they were much larger than they here appear.

FIG. 4.

LEPROSY IS CONTAGIOUS.

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

(*Continued from page 93.*)

As to the second point—*that scientific proof is wanting*—I believe I have said enough in preceding articles to have demonstrated, in fact, that nothing can be said against the existence of positive clinical facts. This scientific proof, with which it is thought that facts observed and reported by so many practitioners can be shaken, will never prevail. The want of such a proof does not invalidate positive facts, for these exist, *ipso facto*, without such proof. It will not do to attribute to this

proof an exclusive importance, and make of its absence an irrefragable argument, putting aside the actual experimental development, of which we have so many examples in the history of other pathological conditions.

I maintain, the actual evolution being given, that it is premature to build on this argument, especially when we have to do with a pathological entity, founded on the bacillary pathogenic. Now, we need it in no way, and its absence will certainly not rob the observed facts of their value; it will come in its appointed time, we doubt not, to confirm what has been proved already by observation.

This has been the history of other affections, and it will doubtless be that of leprosy. I have before given the historical part of this question, and I may say that one step more has been made to-day. Recently I have exposed the last results obtained in this direction, showing that the inoculation of the leper virus tended to localize itself *in situ*. To-day still more is obtained, inasmuch as inoculated animals have presented Hansen's bacillus, in the liver, spleen, lungs, and kidneys.* Even supposing that this had not been the case, it would be sufficient for us to say that leprosy is not a disease of animals, but belongs exclusively to man. It would not be, as I have already said, the only disease of this kind. The same has happened with syphilis. Yet nobody doubted its contagiousness. Much noise has been made around a case of leprosy inoculated somewhere in Honolulu by Dr. Arning, as if this answered all objections. No such argument can invalidate what I have said, and I do not think that those who have caused so much discord with it have gained any advantage.

I regret to say that this inoculation, which is said to have been negative, *is not so*. Let us examine the case: Arning inoculated with leprosy a man sentenced to death; it was done with the convict's consent, whose life was to be spared in return. The bacilli were still living eighteen to twenty months afterwards. Now, though it is certain that during this time no general symptoms have declared themselves (which is not surprising, considering that in all probability the incubation of leprosy is very long), on the other hand the primitive focus exists still after twenty months. The consequences which it has been tried to draw from these data seem to me to be very hazardous ones. This fact is of no use whatever as an argument, and can in no wise shake my position. To insist on this point would be futile; it is better, I think, to wait. Even admitting that this experimental inoculation in a man should have no results, this would show only an absence of proper conditions, a want of organic aptitude in the agent, and in the recipient medium. It is in this same manner,

* Dr. T. Wesener: *Münchener Med. Wochenschrift*, Nos. 16, 17, 18, 1887.

and in no other, that we can understand why in a crowd of human beings some become lepers, and others go free.

Before leaving this subject I shall reproduce the words of Hardy, in order to corroborate what I have just said. He says, on page 1173 of his last work: "Yet, during the last few years, the opinion again reappears and tries to obtain a footing that leprosy is a contagious disease. Dr. Vidal, supported by recent facts, defended these views very aptly in the recent sessions of the Academy of Medicine of Paris (sessions of 13th, 20th, and 27th of October). His speech was about a publication of Zambaco, of Constantinople, who denied that contagion was a cause of the propagation of leprosy in Turkey. Here are the chief arguments produced in favor of contagion: first, an observation of Hawtrey-Benson, who, after observing the disease in a man who had lived in the Indies, and who died of it, saw the same disease develop in the brother of the patient, who had for a whole year slept with the patient and used his clothes.

"Dr. Vidal himself quotes the case of a woman who became a leper six years after her husband had shown the first symptoms of the disease. I could mention other instances, but the most important facts in favor of contagion are undoubtedly the events which took place in the Sandwich Islands, in which it seems certain that leprosy did not exist, when in 1853 a coolie was attacked by elephantiasis. This was then the only leper in the island. Eight years afterwards some of his neighbors were infected. Since then the disease has rapidly spread, so that in 1880—twenty-seven years later—there were 2000 lepers in a population of about 44,000. The same thing happened, it appears, in the island of Mauritius. A leprous passenger was landed there, and the disease has since widely spread itself, so that now the number of lepers is very considerable.

"The facts which I have mentioned constitute arguments which are very conclusive in favor of contagion. They naturally were taken up by a number of physicians, Hansen, of Bergen, at their head. The latter understood that isolation was a necessary hygienic measure. I may, however, say that the problem is not yet solved. The opinion according to which leprosy is a contagious and inoculable disease—that is, that it can be contracted by contact and through a cutaneous excoriation—is probable; but it cannot, so far, be admitted as a scientifically demonstrated truth."

I repeat what I have said before: if scientific demonstration fails, that cannot impugn the authentic cases of contagion we possess to day. The facts are there, and they cannot be disregarded. To use them is our business now, and it is quite sufficient for the present. The rest is vain disputation, in which the terms of the problem are inverted.

I know of nurses and physicians who contracted leprosy from their patients. The existence of the bacillus lepræ alone would make the contagion probable. We must bear in mind that if the contagious diseases are not so in the same degree, neither have they the same manner of transmission. The clinic possesses more than one fact which confirms this view. Woods* mentions the case of a European child who, playing with a leprous pickaninny, saw the latter push a knife into his anesthetic limbs. He tried on himself the same operation with the same knife. Shortly afterwards the white child left Borneo for Holland, where there is no leprosy, and became a leper after a while. The same author mentions Dr. Robertson, of Sechelles, and several nurses of the *hospitals of Calcutta, who became lepers in consequence of accidental inoculation.* Dr. Saxe, President of the Medical Society of the State of California, on his return from the Hawaiian Islands, says: "Leprosy is inoculated in all kinds of manners." He mentions the case of a physician's son who was infected after pricking his legs with a pin with which a Sandwich leper had pricked his own anesthetic patches.† What signifies, before such facts, scientific proof? All the arguments based on its absence cannot make away with existing clinical facts, especially as the latter have a tendency to accumulate. If our opponents declare that positive facts must be accepted, we also shall answer with positive facts. In default of interpretation, we have facts, and these have got to be accepted as they are, and not, as we might like them to be, to fit our theories. Those facts which I have just mentioned are at least sufficient to make us avoid similar accidents.

There is another mode of inoculation—vaccination. The American physicians in Hawaii have more than once observed it.‡ Read the works of Schilling, of Landre, the cases of MacNamara, of Mozufferpore (a contagionist who has seen 8000 lepers in one year, and who publishes facts in support of his views). MacNamara believes in sexual transmission after prolonged cohabitation (years).§ See also the cases recorded by Hildebrand, Robertson, Livingstone, Carter, and Pasquier. Dr. Robertson mentions a case in *The Lancet* of 1876. Dr. Vidal quotes the case of a Brazilian physician who after attending a leper became a leper himself.

*Woods: La Lèpre est-elle Contagieuse, Paris, 1879.

†White: Contagion in Leprosy, 1882. (Read in the American Congress of Dermatology of Newport.)

‡It is not necessary to go to the Sandwich Islands; similar cases have been seen in Europe. Dr. Onetti observed one in Italy in 1846 and published it in several special reviews. Lately Dr. Gairtner published two cases of vaccinal leprosy inoculated to two children, who turned lepers.

§White: Contagion in Leprosy, 1882.

It has been objected that MacNamara saw only one European who was a leper in India, and this is said to militate strongly against contagion (page 448 of the *Chronicle*). This objection has already been answered. MacNamara declares himself a contagionist, and mentions cases; this is the chief case. He does not say whether he did or did not see leprous Europeans. But even if he did not see any, what has that to do with the problem of contagion, which is what we are talking about?

There is really nothing in that part of the quoted passage where it is said "that the cause of contagion is invalidated by," etc. We have much esteem for Brassac (from whom Dr. Arango borrows the quotation), but we cannot see that the cause of contagion is invalidated because one European leper only has been observed.

I wish also to declare that the following passage of Hardy's work, which is found on page 447 of the *Chronicle*, and extracted from page 1173 of the book quoted, does not shake my position: "No contemporary author has recorded an instance of leprous contagion in a country where the disease does not exist. The lepers who came to France may be considered as incapable of communicating the disease to the persons with whom they have intercourse, or with whom they come in contact." Whatever high consideration I may have for Professor Hardy, and I certainly rank him among the great clinicists, I cannot bow here to his authority. I may state, in the first instance, that if Hardy did not observe leprous transmission in Paris, others have seen it there, and in other non-leprous places.

Dr. Vallin, professor of hygiene at the Val-de-Grâce, recently communicated to the Medical Society of the Hospitals a short report of a hyperesthetic leprosy which had developed in a European in consequence of immoral intercourse with a negro boy who suffered from this same form of leprosy. But even if we admit that there have been no such observations in Paris, what does that prove? There may be observations in other countries. There are observations in the United States, for instance; for it appears by the last writings of the American dermatologists that leprosy imported into those parts does not confine itself to individuals, but is transmitted to healthy Americans and sons of healthy individuals.

These facts could not but disturb the American Government, and very strict measures were taken, as I have said in my previous article. Not satisfied with the measures I there mentioned, certain States, like Oregon and California, prevent the landing of lepers and send them back to their country in the steamer that brought them. There are, according to Dr. J. W. Foy, 20,000 Chinese* in California. It is not to

* Transactions of American Derm., 1882.

be wondered at if there are some cases of leprosy in so large a number. There are, in fact, according to the same authority, only fifty-two cases, and it seems that this is in reality the totality of the cases. The Chinese lepers are shipped back as soon as they arrive.

The Chinese are quite sure that the disease is contagious, and not for the world would they work in the same shop with a leper.* To affirm that leprous individuals cannot transmit the disease in non-leprous countries seems to me to be a very rash statement; it is a very cheap way of putting aside the facts published by so many authors. Without further discussion I will quote some facts. Dr. Hawtrey Benson published the following case.† In 1872 this author presented to the medical society of Dublin a leper who had been sent to him by Dr. Stirling, of Thomaston. This subject had spent twenty-two years in the Indies, where he caught the disease, and returned to Ireland with all the external attributes of leprosy. Dr. Hawtrey Benson observed him in his own ward in the hospital at Dublin, and presented him to the medical society of that city. The patient returned to his home and died a year and a half later. During this last period his brother lay down in the same bed with him, and also used his clothes. This brother had never left Ireland, except for a short time which he had spent in England forty-six years previously. As leprosy has not existed in the endemic state in the British Isles for several centuries, he could not have caught there the germs of the disease. However, he became a leper, and Dr. J. Hawtrey Benson presented him (May 2, 1877) to the Medical Society of Dublin. According to our author, he had been most certainly infected by his brother. There were no leprous antecedents in the family.

I can relate another case published in June, 1882, by Dr. Edmund Atkinson. Although it is not as convincing as the preceding, it would be difficult to explain it by any other theory than that of contamination. It is that of a married woman, forty years old, who was admitted in 1880 to the Dispensary of the University Hospital. She was of German origin, and had always lived in Maryland, from which she had never been absent. She had nine sons, of whom five were living and in good health. The husband was also in good health. The first cutaneous manifestations appeared in 1878, and from that period the disease progressed apace. According to Dr. E. Atkinson the cause of the disease was that the woman had had relations with a man called Brown, who lived for two years in the same street, in Baltimore. For one year these two had been next-door neighbors. The observation of this Brown was published by Dr. Rohé (*Maryland Medical Journal*,

* The name of the disease in Chinese is "Maï-Pak."

† *Dublin Medical Journal*, June, 1878.

July, 1878) as one of the three solitary cases of tuberculous leprosy then existent in Maryland. The two families lived in close intimacy; but the woman maintained that never anything had passed between herself and Brown, not even a handshake.

At that time Brown had eruptions, nodules in the face, and was in poor health. The disease developed in Dr. Atkinson's patient a few years after she had lived in neighborly and friendly relations with one of the three solitary lepers of Maryland. It is difficult not to see in this coincidence a relation of cause and effect.*

These two cases are evidently instances of direct contamination. The first, especially, admits of no doubt and proves once more how futile is the assertion of those who maintain "that lepers who arrive in Europe do not transmit the disease. It is shown by fact that such transmission takes place. Munro† records a case of direct contamination: "An Irish woman who had lived thirty years in Stepney, and had never left the British Islands, contracted a mixed form of leprosy in 1866, and died of it in 1874. She had lived near the West and East India Docks, and had been in constant contact with men and things coming from the colonies."

In reference to the information collected by the Royal College of London, I believe that the data which I have mentioned remain unshaken. The authority of Brassac is great, and we feel a due respect for the utterances of men of science. But if Brassac took no notice of the change of opinions which supervenes in some of the members who wrote the report, it behooves us to notice it. These data are given in my last article, and it is useless to recite them again in this place. Suffice it to say that some of the gentlemen who were at that time anti-contagionists have since turned contagionists. There is no doubt about this fact.

My propositions in regard to the contagion and propagation of leprosy in Cuba have been criticized. My first proposition places this country among those into which leprosy was imported. It was necessary to state at once the general law which governed the invasion of this disease, *that the leper carries leprosy with him*, and that those parts which are now leprous are so through contact with leprous individuals. *Never have virgin countries produced lepers.* It was important to lay down this rule so as to forestall the objection that leprosy has existed in Cuba in all times. The third proposition shows the gradual *increase* of the disease and the influence of *isolation*, one being in inverse ratio to the other. In a country like ours, where there existed no kind of data, we thought that in the absence of those more valuable factors these principles might serve as a basis.

* Dr. E. Atkinson, in *Archives of American Medicine*, 1882.

† Munro: Leprosy, 1879.

Is it not very evident to all of us that leprosy continually increases among us? There are departments which are foci of constant propagation, and even in the capital there is a considerable number of lepers. We all know that the disease enlarges every year its sphere of action, destroying the strength of the population and taking away arms from every branch of human activity.

I think that the recrudescence of this awful scourge constitutes an international danger, and that every nation must protect itself, in the measure of its progress and civilization.

In Spain the disease spread in an extraordinary manner. In a recent communication the French consul in Alicante informed the Academy of Paris of this increase and the ravages of leprosy in that province. In an excellent study made in Spain, and entitled "Leprosy in Spain in the Middle of the Nineteenth Century: Its Ætiology and Prophylaxis," by Dr. Mendez Alvarez, we read that since 1851–52 there are among 284 individuals twenty-six cases reputed to be contagious, which added to other cases reported by respectable authors, and considering the views generally held, make him (Alvarez) accept contagiousness, though not absolutely.

According to recent data, coming from good sources, a Sister of Charity, Sor Rosario Garcy, has been infected in the Leper Hospital of Sevilla, where she continues to nurse the sick.

The data contained in the study will enable every one to judge whether or not I am right in asserting the contagiousness of leprosy. Serious and thinking men cannot let such facts pass unperceived; they deserve the attention of every man who is interested in the future of a nation.

After my discussion of the problem in the first article, and the facts here condensed, it is not necessary further to defend my views; they can defend themselves.

THE TREATMENT OF MIGRAINE.

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Migraine—often called megrim, hemicrania, sick, bilious, or blind headache—is a degenerative neurosis, whose most constant and characteristic symptom, paroxysmal headache, usually confined to one-half of the head, occurs during the prime of life. Like all other degenerative neuroses, practically nothing is known of its etiology, save that it is hereditary in more than one-half of the cases. When direct inherit-

ance cannot be traced, search of the ancestral and family relationship will often elicit a history of the existence of some other neurosis of a degenerative type, such as epilepsy, hysteria, tic, periodical inebriety, etc. For instance, I have at present under observation two sisters, aged respectively thirty-two and thirty; one has epilepsy, the other has migraine. It is about as common in males as females, and it chooses its victims from all walks of life. The wage-earner, the scientist, the statesman, the men of letters and of leisure, all furnish their quota of cases. Many men eminent in their callings and professions have studied the phenomena of the disease subjectively and objectively as it has been revealed in themselves, and this accounts for the widely disseminated belief that the disease has special predilection for those of great intellectual possession. The immediate antecedents of an attack of migraine and the associated symptoms which go to make up the phenomena of a paroxysm are: factors that contribute to fatigue, depression, enervation, and exhaustion of the soma and the psyche.

Symptoms.—The paroxysms of migraine occur with great irregularity. Some patients are so fortunate as to have only one or two attacks a year. In others they are of such frequent occurrence that the patient scarcely has any time of complete freedom from the attacks and their consequences. The headache is usually preceded by symptoms which the patient learns to interpret as heralders of an attack. These may be: general depression without attributable or apparent cause, uncontrollable inclination to yawn and gape, an indescribable feeling of confusion in the head, noises in the ear, restless sleep disturbed by disagreeable and terrorizing dreams, obscuration of vision by flashes of light, phantasmagoria, and patches of obscurity of changeable shape and position in the visual field known as scintillating scotomata, and occasionally by more or less complete transient unilateral amblyopia. The visual phenomena are more often ancillary, while the others may exist for some hours previous to the attack. In rare instances the attack is preceded by a feeling of well-being, exemplified by increased bodily tone and considerable mental exaltation. The preliminaries of migraine have often been likened to those of a storm in which the massing of the clouds, the obscuration, and the violence of the elements gather their forces and concentrate, then the downpour occurs. After a variable period the rain gradually or suddenly ceases, the accompanying phenomena recede, and the whole world or the immediate environment seems brighter and clearer by contrast than it was before. Thus the pain and attendant phenomena of migraine may, after the warning given by the symptoms above enumerated, concentrate themselves to one side of the

head and be of intolerable severity and of protracted existence; but on the other hand they may be so insignificant and of such brief duration that the patient continues at his occupation or pleasure. After the attack the patient experiences an indescribable feeling of relief. As a rule the pain is on one side of the head, the left more often than the right. When it has more restricted localization it is likely to be of the forehead and temple. Very often, however, it is on both sides, or it may shift from one to the other. It is described differently by nearly every patient, depending largely on their descriptive powers and capacity for simile. As a rule, it is increased by excitation of any of the special senses, and by anything that disturbs the patient's body or mind. It is ameliorated somewhat, on the other hand, by darkness, stillness, quietude, and cessation of thought.

The phenomena that may precede, accompany, or follow an attack, aside from those mentioned above, are nausea, anorexia, vomit of the bile-stained contents of the stomach, great prostration, hyperesthesia of the special senses, and general irritability. The local accompaniments, which are by no means so constant as the general, are paleness of the skin on one side of the face, enlargement of the pupil of the same side, increase of salivary secretion, narrowness and firmness of the temporal blood-vessels, contracted retinal blood-vessels, revealable by the ophthalmoscope, and lowered surface temperature over the pale areas of the face—phenomena that can be produced artificially in man and in animals by irritation of the cervical sympathetic. When these symptoms are accompaniments of the headache, the name of angiospastic migraine is given to it. Such attacks are sometimes attended by transient motor aphasia and slight motor paresis of one-half of the body, and very rarely transitory paralysis of one oculomotor nerve. In other cases phenomena occur that may be produced in the skin of the face and ear, pupil, salivary glands, etc., by section of the cervical sympathetic, such as redness of the skin, dilatation and pulsation of the temporal arteries, elevation of surface temperature, unilateral facial hyperhydrosis, narrow pupil. Attacks thus attended are called angioparalytic migraine. They are extremely rare compared with the angiospastic variety. When the attacks are preceded and accompanied by subjective sensations referable to the eyes, they are called ophthalmic migraine, although visual defect has very little, if any, relationship to their occurrence or causation. An attack of migraine lasts from a few hours to several days, and as a rule terminates gradually, often attended by vomiting, copious evacuation from the bowels, and occasionally by profuse perspiration or diuresis. Then after a deep, protracted, lethargic slumber, the patient emerges with a feeling of renewed vitality and ambition. Attacks, however, always leave a

memory of pain and anguish which prompts the individual to scrupulously abstain from the attributed causation and apparent antecedents of an outburst.

The course and outcome of the disease are the same as in most of the degenerative neuroses. Left alone, their most striking manifestations have a tendency to increase in severity and frequency. Unlike acquired diseases, they have no inherent tendency to limitation or disappearance. Occasionally the disease phenomena seem to undergo a transformation, and appear as vertigo, gout, epilepsy, or other paroxysmal condition. Dana has recently reported a case in which the transition from migraine to vertigo characteristic of pseudo-Ménière's disease was very striking, while the association of migraine and epilepsy is unfortunately not very rare.

Treatment.—The treatment of migraine may be considered under two headings: (1) the treatment of the patient or the disease, and (2) the treatment of an attack. To the patient himself the latter seems by far the more important, but the physician knows that more can be done to shape the course of the disease and to diminish the totality of suffering by care of the patient in the interval of the attacks than by any amount of medication at the time of the paroxysm. The treatment of the migrainous patient should be begun, like that of all other degenerate diseases, before the patient is born. We cannot here revert to the duty of the physician who may be interrogated concerning the advisability of marriage of those who are burdened with hereditary and familiary taint, further than to mention how difficult it is to act the part of satisfactory guide. The physician should always confine himself to showing the way, and not insist upon accompanying to see that his decision is respected. Considering the indebtedness of the world to migrainous individuals, it would be an assumption on the part of the physician to advise against marriage, for he might be depriving posterity of a Sir John Herschell, a Du Bois-Reymond, or a Wollaston. Nevertheless, if he be more altruistic than utilitarian, he must be true to his ideal and prevent suffering whenever possible. The education of children born of migrainous parents should be conducted along a plan similar to that of those who inherit a tendency to that profound neurosis known as hysteria. In brief, every effort should be bent to make such patient a resistant, vigorous, healthy man or woman. They should neither be subjected nor allowed to subject themselves to the forcing, crowding processes, conglomerated under the name of education or accomplishment, that the modern boy and girl has to go through at the present day. When the age is reached that such a person must make a decision concerning his future occupation or preparation for destiny, the physician, if

given an opportunity, should again be ready to act the part of the sign-post. It is unnecessary to say than an active life out-of-doors contains much less potentiality of migraine than a sedentary life within doors. The perniciousness of alcoholics, tobacco, tea and coffee, over-eating, sexual aberrations and excesses, late hours, and strife of all kinds, should be diligently inculcated and constantly kept before the patient until he comes to recognize their importance. The patient should learn early that freedom from pain stands in more or less definite relationship to mental equanimity, equable disposition, uneventfulness of life, and normal state of the digestive apparatus, and that these should be the object of his strife. He should make such disposition of his time that at least ten hours may be given to sleep, while two or three of the remaining twenty-four should be spent in the open air, indulging in some sort of exercise that will increase the neuromuscular tone and maintain a high degree of nutrition. This may be impossible for the great majority of bread-winners, especially women, in whom, unfortunately, migraine is not rare; but in these cases some shift must be made, either by use of hydric procedures, massage, gymnasium practice, or by shortening the day's work, to compensate for the health-giving indulgences above mentioned. It is in this class particularly that so much can be done by teaching the patient that worry, anxiety, and anticipation of want, or conviction of inability, do far more harm than the actual fulfilment of their daily duties and labors.

Supervision of the diet and the regulation of the bowels are of themselves oftentimes very influential in shaping the frequency and severity of the attack. As a rule, a mixed diet, vegetables predominating, with comparatively little meat, especially red meat, supplemented by the use of milk, combined with an alkali, such as bicarbonate of soda, commercial or natural Vichy, is most suitable. Whenever possible the bowels should be regulated by the admixture of substances to the diet that are known to have a laxative effect and by the use of abdominal massage, gymnastics that strengthen the walls of the abdomen, while simultaneously the tonus of the intestines is increased by the use of vegetable laxatives with belladonna or nux vomica, cold-water injections, sitz baths, etc. The mistake should not be made of administering salines, such as sulphate of soda and Carlsbad salts in large doses, or other substances that deplete the system. The patient should be subjected to the most scrutinizing medical survey, and any departure from normal, either in the organs of the body or in the tissues, repaired or attempt made to overcome them. Occasionally such scrutiny will reveal abnormalities of the eyes, ears, cavities of the head, or of the uterine organs, which may or may not

have any bearing on the neurosis itself or on the frequency of its most prominent manifestations. They, nevertheless, should be overcome, if possible, and for the reason that all physical shortcomings act as a drain upon the general health. The physician who seeks the immediate antecedent of an attack, be it intoxication from without, such as poisoning by one of the metals, overindulgence in food, especially meats, or autointoxications, uric acid, fatigue, etc., and adopts a plan of treatment to eliminate or counteract it, is much more worthy of his hire than he who neglects to do so. It is usually unnecessary to tell migrainous patients how they shall live, what they may do, and what they must avoid; experience is by far a better teacher than rule of thumb. They quickly learn the disastrous effect of such indulgences as late hours, crowded rooms, dietary indiscretions, overexertion, and excesses of different kinds, and avoid them.

It is unnecessary to speak in detail of the utilization of such measures as hydriatics, massage, gymnastics, and even electricity, for the purpose of increasing the patient's general nutritional tone and resistance. Practically they have the same application here as they have in neurasthenia, even in the acquired forms of the latter disease. These agencies have no specific virtue in migraine, and the claims of enthusiasts for the unfailing efficacy of one or other of these measures in the treatment of migraine are not alone a travesty on physiological therapeutics, but an epitome of such enthusiasts' ignorance concerning the genesis of the disease and interpretation of its phenomena. They are all serviceable, and for the reason that they not alone increase the patient's vital force, but they give him a feeling of confidence that something is being done for him, the effects of which are tangible and beneficial. No more is it becoming for those who do not fully recognize the benefits to be derived from the methodical use of these measures to decry their usefulness. Their place in the therapeutics of migraine is no exalted one, but they fill an unoccupied niche. Having said this, we do not feel impelled to recount in detail the modes of applying water or of utilizing massage, or of indulging in gymnastics. A word, however, in regard to electricity is necessary. It is tempting, in speaking of the use of electricity in migraine, to refer to the narrow field that electricity has in the therapeutics of nervous diseases. I shall, however, restrain the impulse and content myself by saying that the many complicated procedures that have been described by devotees of electrotherapeutics are in reality of very little use. Galvanization of the cervical sympathetic has probably more theoretical substantiation than any other procedure. But we have seen from the brief description of the symptomatology of migraine that the sympathetic phenomena may

be those of irritation, or of relaxation, and the form of electricity that is good for the one cannot surely be good for the other. Empiricists may contend that the irritating or negative pole should be used in the angioparalytic variety, and the cathode or sedative pole in the angiospastic variety; but experience will soon convince that they speak not out of the fulness of their knowledge. As a matter of fact, electricity in the shape of galvanism to the cervical sympathetic or to the head, faradism in the shape of general faradization, or the application of the rapidly interrupted current from a long, closely wound coil, the static douche or sparks — in short, any variety of electrical application — has its entire utility in the treatment of migraine in improving the patient's general health, and in inspiring him with a feeling that something beneficial is being done for him.

The drug administration under this caption, namely, the treatment of the patient, is encompassed by giving simple bitters to counteract anorexia, alkalies or acids, dependent upon the reaction of the contents of the stomach, laxatives to overcome constipation, iron, arsenic, and quinine as tissue reconstructives, and the fulfilment of the other requirements that may be apparent or discoverable in each individual case.

There are a few drugs that undoubtedly have a decided effect in diminishing migrainous potentiality, and amongst these the first place is by common consent allotted to the bromides, originally suggested by Liveing, who wrote so illuminatingly of this disease, and brought into wide usage by the recommendation of Charcot. The etiological and clinical resemblance which the disease has to epilepsy no doubt suggested the utility of the most important antiepileptic medicament in migraine. The mode and plan of its administration, as well as the rules for the avoidance of its injurious effects, are the same as those given for epilepsy. The dose depends upon the idiosyncrasy of the patient more than upon any other condition; and this must be determined by experience. The selection of any particular salt of bromine is of no importance, one being about as serviceable as another. After the patient's dosage has been determined, the quantity, be it a scruple or a drachm, should be administered in large quantities of water, plain or alkalinated, at bedtime. As a rule it is not advisable to give it during the day. Its administration should be kept up for a prolonged time, provided there is no diminution of the patient's weight, and no disturbance of digestion and nutrition which is not easily combated. When these occur the measures that are serviceable in combating the phenomena of bromism should be utilized. The administration of the bromides is almost invariably followed by a prolongation of the intervening period of health and by

diminution in severity of the headache and ancillary migrainous phenomena.

During the attack some pain-reliever must be given in sufficient doses to cause amelioration of pain, especially in severe cases. Before the discovery of the modern analgesics, the physician had very little choice about using morphine. The patient demanded it, required it, and got it, and very properly so. Oftentimes, even yet, it is necessary to administer morphine, either by the rectum or subcutaneously, and when used under control of the physician there is little danger of establishing the morphine habit, providing, of course, that the patient is not in a *status migrainous*. As a rule, however, sufficient relief to enable the patient to get through an attack is obtained by the administration of phenacetin, antipyrin, antifebrin, one of the salicylates, caffein, cytisin, lactophenin, etc., or combinations of them. A useful prescription is:

℞ Phenol salicylate..... 10 grains.
Caffein salicylate..... 2 grains.
Phenacetin..... 10 grains.

To be taken with hot milk, or hot water and whiskey.

This formula seems to be particularly serviceable in so-called ophthalmic migraine, associated with pallor of the face. On the other hand, when there is flushing of the face and the other accompaniments above mentioned, I have used a capsule containing camphor, salicylate of menthol, and salicylate of caffeine, of each two grains, the dose being repeated every hour for three doses; then every four hours, if required. It is impossible to give in detail all the combinations of these pain-relievers that may be used with benefit. Patients vary so in their susceptibility to these drugs that some experimentation must be done before the most serviceable one is found. Antifebrin given in five-grain doses and followed by draughts of pure black coffee has been most serviceable in my own experience. It is well to bear in mind that when it is necessary to give one of them hypodermically, antipyrin is the most satisfactory, although it has a tendency to derange the digestive system.

Migraine attended by symptoms of vasomotor spasm is often promptly benefited, although the attack is not materially abbreviated, by the administration of one of the nitrites, the inhalation of nitrite of amyl being most eligible. The drawback to its use is that its action is very evanescent. In this respect the nitrite of soda in one-grain doses is much superior. Gowers, who has been a persistent exponent of the utility of this class of remedies, suggests the administration of fractional doses of nitroglycerin, given every fifteen minutes until the physiological action is manifest. No dogmatic statement can be made

in regard to the efficacy of the nitrites, but a faithful trial should be made of one or all of them in every case of migraine attended by angiospastic phenomena. When the concomitant vasomotor manifestations are of a paralytic variety, which as has before been said is extremely rare, it has been advised to give ergot, but my own experience has been that very little reliance can be placed upon this drug. On the other hand, I have found prompt relief, personally, and in a number of patients, by light manual compression of the carotids, or by a folded handkerchief pinned tightly around the neck. The application of an ice-bag to the head is also sometimes useful and soothing.

The autotoxemic theory of migraine has been more widely accepted, the writer ventures to believe, than it deserves to be, and numerous plans of treatment based upon this theory have been devised and promulgated. There can be no doubt, I think, that there is a state of profoundly disordered function of the digestive tract during an attack of migraine. If the contents of the stomach or intestines, removed during an attack, be examined chemically they will probably contain a small amount of toxic substances. But this perversion of function and the immediate consequences are caused by the profound disorder of the sympathetic nervous system, which is at the bottom of the attack of migraine; they are the results, not the cause, of the migraine. No doubt the digestive disturbance and its entailments acting upon an already overwhelmed economy will help to retard the establishment of equilibrium. Therefore measures should be adopted to nullify the effects of such intoxication and to counteract the formation of the toxic substance. If this can be accomplished by having the patient drink copiously of hot water, by the administration of a soap-suds enema, or by lavage, these should be done. They are aids only in facilitating the restoration of neural equilibrium.

In the majority of cases it is unnecessary to enjoin absolute rest and supreme quiet, with freedom from every form of irritation and excitement, during an attack. The patient voluntarily embraces these measures, for one attack is sufficient to apprise him of the comparative comfort to be thus obtained. After a severe attack the patient should receive the same attention as in epilepsy. The inroads which the suffering has made upon his resistance and morale should be combated by the use of readily absorbable and highly nutritious substances, and preparation should be made to strengthen any vulnerable points in the general health previous to the occurrence of the next attack.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P.O. Box 484, Detroit, Mich.

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EDITORIAL ARTICLES.

PSEUDOSCIENTIFIC CREDULITY.

It is a long time since New Englanders have burned a witch. The advance of civilization has been accompanied by a general enlightenment that has shaken off from the tree of knowledge a large portion of its imperfect adventitious fruit. We can now only ridicule those diabolical concoctions which marked the therapeutics of the Middle Ages. "Witches' mummy, maw and gulf of the ravin'd salt-sea shark," and the other delicacies which made "thick and slab" the gruel compounded by Macbeth's elderly female friends and counselors; poultices of bovine excrement; amulets and charms of claws; even innocent necklaces of amber—all these relics of an age of superstition and crass credulity have lost their hold upon the professional and popular mind.

In modern times, however, with the development of the laws and truth of natural science—perhaps in part as a result of the almost miraculous inventions and discoveries of a scientific character that have attended this development—the remnant of that medieval superstition and credulity has at different periods in these later days attached itself with more or less tenacity to chimerical projects of a pseudoscientific sort. Recent years afford no more striking proof that these instincts still thrive in our midst, and no more brilliant illustration of the extent to which a cunning shrewdness may prey upon them, than is afforded by the checkered career of the late Keeley, of "motor" fame. Exploited, petted, and fostered throughout his career by men of prominence in intellectual and commercial circles, he seems to have held them all fascinated, solely by the appeal his preposterous theories made to their credulity. It is reported that when an examination was made, after his demise, of his complicated "motor" and its intricate accessories, there was discov-

ered a large steel sphere, capable of storing compressed air under very high pressure, placed in a hidden but convenient location, which supplied through a very small tube (passing for a conducting wire) the power to influence the "motor." There seems now to have been no basis whatever in his alleged discoveries of a new motive power or "influence." And yet for nearly a quarter of a century this man had been able to interest in his scheme not only intelligent people of well known ability, but also to procure the aid of no small amount of capital. This seems to have been an instance in which the sort of credulity that has for its basis a smattering knowledge of mechanics drew a glowing veil of false enthusiasm over the usually calculating and unemotional eye of capital.

Apparently the field of therapeutics affords pasture as verdant, rich, and sustaining as that of mechanics. Not only is that variety of quackery which exists beyond the pale of legitimate medical practice fed and supported by popular credulity, but there is grave reason for the suspicion that not a little of this medieval quality of mind still infests the regular profession. The tons of alleged literature annually sent to medical men, lauding various proprietary remedies, abounding in lurid testimonials and reports of marvelous cures, would cease to burden the postal department and choke the engulfing maw of the physician's waste basket were there not some response to these appeals, that renders the enormous circulation of such literature pecuniarily profitable.

There are some undesirable qualities in the human mind that seem to resist enlightenment with great pertinacity, and of all these qualities, that form of credulity which has a sort of pseudoscientific basis seems most to thrive in our modern life. "The earth hath bubbles as the water has, and these are of them."

EDITORIAL NOTES.

The Telephone Transmitter.

The telephone transmitter is now the offender selected by bacteriologists for censure. Here in Detroit some ingenious microbe hunter has been making cultures from the transmitters of the instruments in use in hotels and other public places. Nothing worse than streptococcus pyogenes aureus seems to have been discovered, but in a strict sense this part of the telephone is subject to foul and disagreeable contamination which under special circumstances may be dangerous. This part of the instrument will, however, fortunately lend itself to antiseptic treatment.

ITEMS AND NOTES.

GURLT, the Berlin surgeon, is dead.

THE German Surgical Congress will meet in Berlin April 5 to 8, 1899.

RECENT reports from Calcutta show a number of sporadic cases of plague in that city.

THE Havana authorities have adopted the Bertillon system for identification of criminals.

THE annual births exceeded the annual deaths in New York during the past year by 12,775.

AT Coteau de Las and Coteau Landing, in the Province of Quebec, smallpox has made its appearance.

PHILIP KNOLL is said to have succeeded the late Stricker in the chair of experimental pathology at Vienna.

THE Sixth Congress of German Laryngologists and Rhinologists will be held at Heidelberg during May, 1899.

ENFORCED idleness in the Kings county penitentiary at Brooklyn caused the insanity of six convicts not long since.

THE number of physicians in the German Empire has increased from 24,393 in September, 1897, to 25,178 in September, 1898.

IT has been estimated that a death under an anesthetic occurs once in 16,000 administrations of ether; and once in 3000 of chloroform.

THE report of the New York City Board of Health shows that in 1898 there were 66,161 deaths, 78,963 births, and 28,877 marriages.

THE Savannah Medical Society gave a banquet at the De Soto on January 4, in honor of George M. Sternberg, surgeon-general of the United States army.

DR. JOSE LOZADA, one of the commissioners sent by Aguinaldo to establish a Philippine junta in Washington, is professor of medicine in the college at Manila.

THE medical report of the French army states that since the introduction of the serum treatment of diphtheria the mortality among cases of that disease has fallen from 11.3 to 6 per cent.

The number of students in the University of Berlin this winter is the highest recorded since its foundation. There are 6151 matriculated students, of whom 1311 belong to the Medical Faculty.

Recent reports from Klondike show that there are over 300 miners living in dugouts on the outskirts of Dawson City, and that three or four of this number are being daily killed by scurvy and typhoid fever.

According to report, King Oscar of Sweden is suffering from Bright's disease in a particularly acute form, and has been obliged to hand over the reins of government to his eldest son, the Crown Prince Gustavus.

Paris is said to have fastened a new vicious habit on its people—petroleum drinking. The intoxication is reported to produce melancholy and despair. An increased number of suicides is one of the results predicted from the growth of the habit.

There has recently been introduced into the New York State Legislature a bill forbidding the sale of poisonous drugs by any one but a duly licensed pharmacist. This measure is made to prevent the sale of such poisons by unlicensed clerks and students of pharmacy.

The Esquimau gives the doctor his fee as soon as he comes. If the patient recovers he keeps it; otherwise he returns it to the family. In Mexico the doctor gets his fee before the patient is buried; otherwise the deceased is believed to dwell in purgatory until the fee is paid.

The Kaiser Franz Josef Jubilee Hospital for Children.—The sum of $400,000 has been set aside by the City Council of Vienna for the erection of a hospital for the treatment of the infectious diseases of children, as a jubilee offering to Emperor Franz Josef of Austria.

At the last meeting of the Berlin Medical Society, Virchow was again elected president, and Von Bergmann, Senator, and Abraham vice-presidents. It was decided not to admit women physicians. There are 1130 members, and a balance in the treasury of over $32,000.

Dr. H. L. Hastings declares that women go with their necks bare, and men keep theirs swathed and bandaged, and ten women have sweet voices to one man. A man's voice should be as pure as a woman's. Why is it not? He is choked and shaved.—*Jour. Med. and Science.*

SURGEON-GENERAL STERNBERG recommends the employment of expert female nurses in the army, nurses not to exceed in number one per cent of the army. These nurses are to receive not more than $50 per month, and the chief nurses not more than $75 per month. The nurses and chief nurses are to be graduates of training schools for nurses.

TO TALK of alcohol as the sole specific cause of inebriety, says the *Quarterly Journal of Inebriety*, is a mistake that reflects on the powers of observation of a medical man. In almost any circle of life facts to the contrary can be found. Inebriety is a disease of degeneration involving and depending on many and most complex causes, and not alone on one single drug like alcohol.

ACCORDING to the *Medical Record*, all the surgeons of the Cuban army have presented a petition to the General Assembly, praying that Dr. Maximo Zertucha, who is believed to have led General Maceo to the ambush where he was killed, shall be forbidden to practice his profession in Cuba. They say that if he is permitted to practice medicine on the island they will resign.

THERE is a city of 60,000 inhabitants in Syria, not far from Latakia, in which there is not a single physician. The name of this fortunate or unfortunate place is Hamah. As is the case with most of the towns in that country, diseases of the eyes are exceedingly common, and an oculist who is willing to rough it and to suffer many discomforts could doubtless gather in numerous shekels.

THE public prints, now that the century is nearing completion, are recalling (*Journal of the American Medical Association*) much past history in the matter of incidents and localities by reports of decedents who have lived up to and beyond 100 years of age. The colored race in the main carry off the palm, perhaps according to Tesla's theory of sleepfulness and a happy indifference to worriment.

ACCORDING to the *Medical Record*, a French physician has recently reported to the Académie des Sciences the results of his experiments with x-rays on blind children. Among 204, he found five boys and four girls who were able to recognize the Roentgen rays. Some saw the x, cathodic and fluorescent rays, others only the cathodic and x-rays, and one described them as being of reddish color.

THE decree of the Prussian Ministry, according to which the degree of doctor can only be granted after the Staat's examen has been passed, the degree itself not being a legal license, came into force

on October 1, 1898. The other German States have now followed the example of Prussia. The different governments are now seeking to establish uniform regulations for the granting of the M.D. degree.

It is said Sir William Jenner, the best known of the Queen's physicians, who died recently, made a larger income than any other consulting physician in England. His revenue from his practice averaged $75,000 annually. His largest fees were two of 5000 guineas each, both from American patients. One was for going to Scotland, and the other was in payment for attendance on a patient in Brighton, only an hour from London.

One of the first persons to inhale nitrous oxide gas was Anna, the wife of Dr. Thomas Beddoes, sister of Maria Edgeworth, the novelist, and daughter of Honora Sneyd, who married Richard Edgeworth in 1773. Three years previously Miss Sneyd rejected the suit of John André, who was shot as a spy by George Washington's orders in 1780, for whom the whole British army went into mourning, and of whom a tablet, in Westminster Abbey, tells: "He fell a sacrifice to his great zeal for his king and country, when employed in an important and hazardous enterprise."

An antituberculosis bill has been introduced into the New York State Senate (*Medical Record*), providing that all cattle brought into the State shall have had a test thirty days previous at the hands of a State official, and shall be admitted only after this official has furnished a written permit to import them. All transportation companies are forbidden to carry cattle without such permit. No indemnity is to be paid for slaughter of diseased cattle brought into the State without a permit. Violation of the law imposes a fine of $25 to $250 for the first offense, and six months' to one year's imprisonment for a second offense.

The Russian court seems to be well equipped with medical aid, no fewer than twenty-eight physicians being at the Czar's command. These include the royal physician in ordinary, with ten honorary associates; three surgeons in ordinary, with four associates; an accoucheur, with two associates; two oculists; an expert in diseases of children, with an honorary associate; two physicians especially attached to the Emperor; and a dentist. With such an *entourage* of medical skill the young Czar's health should be assured. Yet, recalling the history of Russian monarchs, the object of so much professional solicitude may possibly feel less secure than ever; since it is in the court circle and the Emperor's household that the most startling nihilist plots have been unearthed.

NEW PUBLICATIONS.

TWENTIETH CENTURY PRACTICE OF MEDICINE.

The new volume is an exceedingly interesting one. The general pathology and bacteriology of diphtheria form the subject of the first article, by Wm. Hallock Park. The history of the subject is recorded in an attractive way, and the whole philosophy of antitoxin is carefully described. The symptomatology and treatment of diphtheria are entrusted to that veteran authority Jacobi, and his article will well repay perusal. Tetanus is discussed by Victor Babes, of Bucharest. The remainder of the volume is devoted to a consideration of neoplasms. Cancer is commented upon by W. Roger Williams of England, and Coley of New York. The same authorities also discuss sarcoma. A special article by McGuire, of Richmond, is devoted to the malignant diseases of the female organs of generation. The present volume will confirm the favorable verdict already recorded in favor of its predecessors. As a system of medicine the Twentieth Century Practice is an admirable compendium of modern medical science.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Volume XVII: Infectious Diseases and Malignant New Growths. New York: William Wood & Company, 1898.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY.

The American Year-book of Medicine and Surgery is a monument of industry and a marvel of condensation. The whole field of medicine is completely traversed and all notable advances accurately recorded. The difficult duties undertaken by the department editors have in nearly all instances been performed with conspicuous ability. It requires considerable expertness to decide as to the positive value of much that is written, but in the present work this has been done in such a manner that little is omitted, nor the importance of any contribution exaggerated. For the busy practitioner who desires to be kept thoroughly abreast with medical literature, this method of having his medical journals read for him cannot prove to be anything but a great boon. This volume is admirably bound, and is a handsome addition to the library shelves.

The American Year-book of Medicine and Surgery. Being a Yearly Digest of Scientific Progress and Authoritative Opinion in All Branches of Medicine and Surgery, Drawn from Journals, Monographs, and Text-books of the Leading American and Foreign Authors and Investigators. Collected and Arranged with Critical Editorial Comments under the General Editorial Charge of George M. Gould, M.D. Illustrated. Philadelphia: W. B. Saunders, 1899.

SAUNDERS' POCKET MEDICAL FORMULARY.

This is a conveniently arranged pocket manual for the practicing physician. It contains for every disease the formulæ employed by well known clinicians. It contains a posological table, formulæ and doses for hypodermic medication, poisons and their antidotes, diameters of the female pelvis and fetal head, obstetrical table, diet list for various diseases, materials and drugs used in antiseptic surgery, treatment of asphyxia from drowning, surgical remembrances, tables of incompatibles, eruptive fevers, weights and measures, etc. It is an excellent example of its kind.

Saunders' Pocket Medical Formulary. By William M. Powell, M.D. Fifth Edition, Thoroughly Revised. Philadelphia: W. B. Saunders, 1899.

THE POCKET THERAPIST.

Among works of ready reference for the busy physician, this one will take a high place. It deals with the conditions for which treatment is indicated alphabetically. Its recommendations are by no means confined to merely medicinal measures, but the rational treatment and management of disease is quite fully exemplified. It is an excellent little book, written in a most attractive style, and full of the most timely suggestions.

The Pocket Therapist. A Concise Manual of Modern Treatment, for the Physician and Student. Arranged Alphabetically for Ready Reference. By Thos. Stretch Dowse, M.D. New York: Wilbur B. Ketcham.

MECHANO-THERAPY.

The methods of mechano-therapy now in use have been condensed in this practical little volume. Nurses and attendants on the sick, who desire to familiarize themselves with the correct method of practicing massage, will gain much from a perusal of this work. The system adopted by the Royal Gymnastic Institute of Sweden has been principally followed.

A Text-book of Mechano-therapy (Massage and Medical Gymnastics). Especially Prepared for the Use of Medical Students and Trained Nurses. By Axel V. Grafstrom, B.Sc., M.D. With Eleven Pen-and-ink Sketches by the Author. Philadelphia: W. B. Saunders, 1899.

THE SEXUAL INSTINCT.

The sexual instinct is here considered in its sociological and physiological aspects. The matter has been treated in a clean but very suggestive way. The importance of a just estimation of this instinct and its universal bearings has been insisted upon. The author discusses various questions connected with the sexual life from a lofty standpoint, and urges a better understanding of the important matters with which he deals.

The Sexual Instinct. Its Uses and Dangers as Affecting Heredity and Morals. Essentials to the Welfare of the Individual Future of the Race. By James Foster Scott, B.A., M.D., C.M. 8vo; pp. 436. Price, $2.00. New York: E. B. Treat & Co., 1899.

MEDICAL NEWS POCKET FORMULARY.

Pocket formularies have a certain legitimate field of usefulness, for the best informed practitioner may at times forget an appropriate drug. The treatment of disease will often be more successful if the practitioner has at hand the collective experience of the profession. This little book is convenient in size and shape and will doubtless be a welcome addition to the resources of the general practitioner.

The Medical News Pocket Formulary for 1899. By E. Quin Thornton, M.D. Philadelphia and New York: Lea Brothers & Co., 1899.

PROCEEDINGS OF THE BERLIN MEDICAL SOCIETY.

This is a collection of the papers and discussions of this celebrated Society. It is needless to comment on the high value of the communications.

Verhandlungen der Berliner Medicinischen Gesellschaft aus dem Gesellschaftsjahre, 1898. (Separat-Abdruck aus der Berliner Klinischen Wochenschrift.) Herausgegeben von dem Vorstande der Gesellschaft. Band XXIX. Berlin: Gedruckt bei L. Schumacher, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgery in the Greco-Turkish War.

The experiences of F. S. Abbott (*Lancet*, Jan. 21, 1899) in the late Greco-Turkish war, in regard to the handling of wounds inflicted by modern firearms, has led him to the following conclusions:

The Roentgen rays should always, if possible, be available at that hospital nearest the front in which the wounds can be first properly examined and dealt with.

The skiagrams should be taken on Eastman's positive paper, which is sufficiently satisfactory for the detection of foreign bodies.

The apparatus is of no use on the field, where the detection of bullets can only be an incentive to premature exploration.

The less wounds are tampered with before satisfactory surroundings are reached the better. All difficult bullets should be removed by a fresh incision and the track ignored.

The modern bullet from its greater penetrating power will be much less frequently found in the body than its predecessors. It is practically aseptic, and there is no urgency for removal.

The hole of entrance is often extremely small. Suppuration is generally due to pieces of clothing carried into the tissues. Superficial septic sinuses should be excised. Wounds of lung by modern bullets run a comparatively favorable course.

Small-bore bullets may bore through a bone without causing any line of fracture whatever, and every degree of injury from this up to the most extensive comminution may be met with.

Passive movements and massage when possible should be begun early in bullet wound fractures.

Inguinal Hernia.

W. C. Braisted, of the United States Navy, in an article in the *Medical Record* of January 28, 1899, in which he views hernia from a service standpoint, draws the following conclusions as to the justification of operative procedures:

1. Those cases absolutely incapacitated for duty in which the physical condition is such as to stand operative procedures.

2. All cases up to thirty-five and forty years of age, with good muscular development, whether incapacitated for work or not.

3. Cases in which immense strain has forced a hernial protrusion, and left the ring, otherwise strong, impaired.

4. All cases in which trusses prove irritating or dangerous.

5. The operation is to be recommended for otherwise desirable applicants for enlistment, and these men are to be considered fit for enlistment after the operation has proved its permanency by four to six years' trial.

6. In all cases in which strangulation is actually present or threatens, or in which recurring discomfort and pain show the tendency to hernia, and in which the slight repeated engagement of the intestine in the internal ring calls attention to the liability to this accident.

Sterility and Gonorrhea.

Benzler, in the *Berliner Klinische Wochenschrift*, No. 51, investigated the influence of double orchitis in wedlock, not only those cases caused by gonorrhea, but also those of traumatic origin, and by his investigations has discovered that in more than seventy-seven per cent the faculty of reproduction was retained. He instituted a general investigation of 3000 patients then confined in the military hospital at Hanover suffering from gonorrhea. Only 474 of this large number were found to have been married. Sterility was only considered when those married had passed three years together without children being born to them. After the expiration of this time cases of absolute sterility caused by single orchitis increased from 10.5 to 23.4 per cent, and those of double orchitis to 41.7 per cent. The foregoing facts substantiate the author's assertion, viz., that of every hundred men suffering from double orchitis, seventy-seven of them retain the power of reproduction, provided that the women they marry be capable of bearing children, and that they have not been rendered ill and sterile by the man.

Tuberculosis of the Testicle.

M. Reynier read a paper a few weeks ago before the Paris Academy of Medicine (*Medical Press and Circular*) on a case of tuberculous disease of the testicle treated by castration and resection of a large portion of the vas deferens in a man aged twenty-six. In order to be able to remove a sufficient length of the vas deferens, the operator had to incise the inguinal canal and turn aside the peritoneum. It should be remarked, the speaker said, that frequently in practicing castration for tuberculous disease of the testicle the section of the vas deferens was not made high enough; persistent fistulæ were the result. In three cases he was obliged to resect the canal a second

time. Generally speaking, he believed that one should not hesitate to operate as completely as possible in the above affection, which was by no means benign, for in spite of the best general treatment it might infect the lungs if allowed to develop.

MEDICINE.

Thomas Dover, M.B., Physician and Buccaneer.

Thomas Dover, the doctor, entered the company of posterity, and has drifted into our modern life, on a powder label; while Thomas Dover, the buccaneer, third in command and one of the principal owners of the *Duke* and *Duchess* (two privateers of ancient Bristol), discoverer of Alexander Selkirk (the original Robinson Crusoe), in spite of enduring claims on our gratitude, has been forgotten.

The *Quarterly Medical Journal*, vol. vii, part 1, published at length an account of the life of Dover, obtained from various sources and notably from an article by Dr. Wm. Osler.

Thomas Dover, born in 1660, was a Bachelor of Medicine of Cambridge. He settled in practice in Bristol, and in 1708 he joined a group of Bristol merchants in a privateering expedition to the South Seas. The narrative of the voyage was published by Captain Woodes Rogers in "A Cruising Voyage Round the World, 1708–1711," London, 1712. This particular voyage was made memorable chiefly on account of the discovery of Robinson Crusoe on the Island of Juan Fernandez. The expedition later sacked the two cities of Guayaquil, Dover leading the van in the assault. Several ships were taken as prizes, and as captain of one of these vessels, the *Bachelor*, Dover returned with the expedition to England. As the expedition is said to have realized £170,000, Dover as a considerable owner must have retired from buccaneering a very wealthy man. It was as late as 1731, when Dover was about seventy years of age, that he settled permanently in London. It was late in life to begin a London practice, but he quickly gained notoriety by a method even then in vogue, of writing himself into practice. His work published in 1732 was entitled "The Ancient Physician's Legacy to His Country, Being What He Has Collected Himself in Forty-nine Years of Practice." It was distinctly a popular work, purporting to describe the diseases of mankind in so plain a manner *that any person may know the nature of his own disease; together with the several remedies for each distemper faithfully set down.*

The work is said to have made a great noise in London, and was the subject of discussion in almost every coffee-house. Later editions

abound in letters from grateful patients extolling his virtues. In the section on Gout is given the formula of his favorite powder: "Take opium, 1 ounce; saltpetre and tartar vitriolated, each 4 ounces; ipecacuanha, 1 ounce."

He regarded quicksilver as a specific for almost every disease, often ordering the patient an ounce daily of crude mercury. He was continually at war with his fellow physicians and the apothecaries (the general practitioners of that day), and his assaults on his associates were a constant source of amusement to the coffee-house frequenters, among whom his book made such a stir. He is described as "a man of rough temper, who could not easily agree with those about him." He died in 1741 or 1742.

Autointoxication Phenomena After Administration of Heart Remedies.

Herr Riegel, in the *Vereins-Beilage der Deutschen Medicinischen Wochenschrift*, No. 51, 1898, reports upon certain symptoms which he observed in several cases of heart disease with severe dropsy after the administration of diuretic remedies. He has also noticed that if under treatment with digitalis and like remedies the dropsical phenomena rapidly disappear, no grave symptoms have been known to succeed. A combination of digitalis with diuretin, which the author has administered in several cases, produced no threatening symptoms, notwithstanding extreme diuresis and frequently the rapid diminution of dropsy; and although even headache, somnolence, and delirium were produced, these phenomena never reached a higher grade and always disappeared rapidly. Upon the other hand, however, the author noticed in several cases of valvular insufficiency with severe dropsy after prolonged use (five to six days) of calomel, a remarkably increased diuresis, with almost immediate disappearance of dropsy, whereupon symptoms of collapse ensued which could scarcely be accepted but as autointoxication. In one case after administration of calomel for five days in doses of ten grains a day, the quantity of urine passed in twenty-four hours increased to 7000 cubic centimeters, and in another case increased upon the sixth day to 11,200 cubic centimeters. At the same time the dropsical phenomena retrogressed, bringing temporary relief to the patient, but a critical collapse soon ensued. The patients appeared as if in a state of coma, lying stupefied in bed, while their breathing was long and stertorous. In one of these cases, though the patient was already very weak, death occurred after a short time. Eichhorst, who has long since mentioned similar phenomena (though of a less severe form) after administration of

digitalis and diuretin, does not look upon them as cause for apprehension, because all his patients recovered.

The preceding observations demonstrate that under certain conditions the rapid retrogression of dropsy may bring most threatening phenomena in its wake. Nor is there room for any doubt that in these cases it refers to an autointoxication caused by toxic matter taken into the blood from the edematous fluids. These observations may serve also as an admonition for extreme care in the administration of strong diuretics, especially calomel, in cases of acute dropsy.

THERAPEUTICS.

Erysipelas Toxins in Leprosy.

At a meeting of the Medical Section of the New York Academy of Medicine on December 20, 1898 (*Philadelphia Medical Journal*, Dec. 31, 1898), H. D. Chapin read a paper in which he gave the results of some experiments in the treatment of leprosy with the toxins of erysipelas. Four cases were subjected to this treatment, which covered a period of seven weeks. The initial dose was one minim of Coley's preparation of the toxins of erysipelas and of the bacillus prodigiosus, and this was gradually increased, until near the close of the experiment in each case a dose of twenty-two minims was reached. The temperature usually reached the maximum within three or four hours, and the reaction was sometimes characterized by the occurrence of rigors. Chapin concludes that (1) injections of the toxins of erysipelas have no effect on the course of leprosy, and (2) the system may tolerate large and continued injections if the dose is gradually increased.

In the discussion P. A. Morrow said that previous experiments in this direction had also proved unsatisfactory, and from existing knowledge of the pathology of leprosy little else could be expected. However, the future may possibly furnish a treatment worthy of the name, and if so it would probably be something along the line of serum-therapy. Antileprous serum had been extensively tested in various parts of the world, and the results submitted to the International Leprosy Congress, which decided that the treatment was a failure. Some encouraging results have been obtained with antivenine, both in America and in other countries. Coley spoke of the comparative safety of the toxin treatment, and called attention to the necessity of protecting from infection, during the treatment, all open sloughing areas. This had been emphasized in one of Chapin's cases, in which a neglect of proper precautions in this respect had resulted in increased inflammation.

In the treatment of malignant disease Coley had given the toxins over long periods without causing deterioration of the general health.

Serum and Gelatin in Hemoptysis.

Professor Davezac, of Bordeaux (*Medical Press and Circular*), has treated with success hemoptysis in two tuberculous patients with subcutaneous injections of serum and gelatin (two-per-cent). In one case he injected into the outside of the thigh five cubic centimeters (one drachm) of the solution, and the hemoptysis ceased. Double this dose was injected in the second case, with a similar favorable result.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Pulsating Exophthalmus.

Schirmer (*Deutsche Medicinische Wochenschrift*) quotes two cases of pulsating exophthalmus. The first case was a woman who had been pierced in the inner cornea of the right eye, and who showed, upon awakening from a swoon which lasted one-half hour, all the symptoms of pulsating exophthalmus. About two weeks later she was admitted into the eye clinic. Digital compression of the right carotis communis, which compression lasted at first only two minutes, but was later extended to thirty minutes, occasioned no improvement. After two weeks, under binding by Professor Tilman, the noise and pulsation were immediately reduced and the exophthalmus diminished.

The second case was one of a servant-girl, aged twenty-five years, who one year ago had been kicked by a horse and in consequence suffered from a complicated fracture of the left superior maxilla. During May, 1898, she had been struck across the head and right eye by a cow's tail, and in June of the same year she lifted an extremely heavy can of milk. Immediately after the last occurrence she suffered from pains in her head and right eye and severe tinnitus. Two days the patient had typical pulsating exophthalmus of the right eye, which suffered no material change by compression of the right carotid, but upon compression of the left the pulsation ceased immediately. As an anomalous vascular expiration may be excluded by experiment upon the live man, we must allow that in this case a rupture of the left carotid in the left sinus cavernosus produced right exophthalmus. The noises are more noticeable over the left than over the right part

of the head. Minute examination also proved that the left bulbus—of which a portion protruded—pulsated distinctly. Digital compression of the left carotis communis, with pressure bandaging and absolute rest in bed, were productive of an entire cure of the right pulsating exophthalmus; the condition of the left, however, remained unchanged, noises being distinctly audible. Now after the expiration of two months the right eye is quite normal, the left remaining unchanged, with protrusion and distinct pulsation. Patient pursues her daily duties without difficulty.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Cæsarian Section in the Philippines.

In view of the pending question with regard to the acquisition of the Philippines, it is not uninteresting to learn of the popularity there of an operation which is now not infrequently performed in this community. The following account is taken from the *British Medical Journal* (*Boston Medical and Surgical Journal*, Jan. 26, 1899):

Dr. Lobti, of Biarritz, furnishes us with information about obstetrics in the Philippines, even more remarkable than the recent reports as to the strange social and political relations of the inhabitants of those islands. Owing to well known religious prejudices, craniotomy is doubtless rarely, if ever, practiced, but Cæsarian section after the death of the mother is not rarely performed as a religious duty. In 1821, the year when a deadly epidemic of cholera ravaged the Philippines, six post-mortem Cæsarian sections were undertaken in Bohol alone. The parish register contains a notification of the baptism of the children, two being reported as strong, and the remaining four likely to live. No serious comment need be made on this alleged saving of all the six infants who survived the algid stage of cholera and the death of the parent. In another village the same operation was undertaken in one case, and the child lived, it is said, seven hours. Even more incredible is the case of a woman in Cabancalan, Isle of Negros, who died pregnant; her abdomen was opened twenty-four hours after death. The child, it is related, showed every sign of life. Six years later, at Mandana, a child is said to have been extracted seven hours after the death of its mother. Not only was it reported as living, but it is said to be yet alive to witness the truth of the

report. In the Isle of Negros a living female fetus was removed from the body of a woman who had been murdered two hours previously. Lastly comes an announcement—as long ago, we must observe, as December 12, 1854—in the *Official Bulletin* of Manila. Cæsarian section was performed on the body of a woman five months pregnant five hours after her death. The fetus lived for half an hour. Of the above statements, reproduced in the *Journal d'Hygiéne*, it may be confidently asserted that they include two facts mixed up with a mass of what we may gently term inaccuracies; first, that post-mortem Cæsarian section is often undertaken in the Philippines, no doubt more frequently than above reported; and secondly, that there is an extreme prejudice in its favor which makes the natives eager and ready to believe that the aim of the proceeding is not missed.

Implantation of Ureters in Rectum.

F. H. Martin (*Journal of the American Medical Association*, Jan. 28, 1899) has devised a new operation for dealing with the ureters in cases where extirpation of the urinary bladder becomes necessary. From experiments on dogs he has found that the rectum makes a fairly good receptacle for the urine, but that implantation of the ureters as has been heretofore proposed results in infection of the kidney, and subsequent death from nephritis. He has therefore attempted to obviate this evil, and has succeeded by so placing the ureters that they will empty in the direction of the long diameter of the rectum, in the walls of which they are buried longitudinally for a distance of an inch or more. By so doing, in the act of defecation, the fecal mass will squeeze the caliber of the ureters closed by its pressure on the mucous membrane, and the pressure being exerted from above downwards in the direction of the onward flow of the urine, will empty the ureter by a milking process. As Dr. Martin's article is to be considered as only preliminary, we shall look for the complete elucidation of his method with interest.

Bicornuate Uterus Mistaken for Ectopic Gestation.

Gibson (*Canadian Journal of Medicine and Surgery*, December, 1898) reports a case of pregnancy in this rare anatomical anomaly. The patient was first treated for leucorrhea, and afterwards for bronchitis. During the latter attack pelvic and bearing-down pains were complained of, with irregular menstruation, and suspicions of pregnancy. Later the patient became much reduced physically and suffered greatly from hyperemesis. Examination discovered an ovoid tumor to the left of and apparently continuous with the uterus. The

growth was slightly movable and extremely tender to the touch. The sound entered the cavity 3½ inches. On account of the serious condition of the patient and the possibility of ectopic gestation, exploratory operation was undertaken. The tumor was then found to be the impregnated left horn of the uterus. For a week following the patient did poorly, but abortion then taking place, all of the symptoms immediately subsided and she made a good recovery. Later a sound could be passed into each of the uterine horns. There was but one cervical canal.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

The Pathology of Epilepsy.

We have previously referred to investigations looking to the discovery of the toxic agent in the production of epilepsy. One author advances the theory that paraxanthin is the toxic offender, and in the October number of the *Alienist and Neurologist* Dr. N. Krainsky, of Charcow, has an elaborate article detailing extended experiments and studies, from which it seems probable that he will eventually satisfactorily confirm his theory that carbamate of ammonium is the toxic factor which leads to so much misery.

He first investigated the elimination of uric acid by epileptic patients, and found that a marked diminution in its excretion preceded every seizure by from twenty-four to forty-eight hours, its elimination being proportionately increased after the attack. The utter absence of gross post-mortem evidence suggested to him, as it has to others, the theory of autointoxication, and working along this line, he injected into a rabbit an extract of the brain of an epileptic who had died during a seizure, but with practically negative effect.

However, defibrinated blood abstracted from the cervical region of a boy in status epilepticus, when injected into the groin of a rabbit produced a convulsion within two or three minutes and established an epilepsy, from which the rabbit eventually died. Blood taken between attacks had no effect.

On chemical grounds carbamic acid, closely related to urea in the reaction of its formation, was first considered as the possible source of the toxic action, but among its derivatives carbamate of ammonium alone corresponds in the necessary composition, decomposition, etc. Carbamate of ammonium may accumulate in the blood, produce a seizure, and then be decomposed into urea and H_2O.

Carbamic acid was found in traces in the blood of healthy persons, but in no such quantities as in that of epileptics, but only its ammonium salt produces epileptic seizures, as demonstrated by careful experiment. In the blood of several epileptic patients, taken on the day of seizures, the presence of NH_3 was repeatedly demonstrated, and in large quantity, the more as the seizures were more severe in character.

Having determined separately the presence of carbamic acid and ammonium in the blood of epileptics at the time of seizures, Dr. Krainsky desires in future experiments to determine the presence of these two compounds simultaneously, that the theory may be more definitely and conclusively confirmed that carbamate of ammonium is the toxic agent, the accumulation of which in the blood produces the epileptic disturbances.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Treatment of Lupus Erythematosus.

Dr. J. C. White, in the *Journal of Cutaneous and Genito-Urinary Diseases* of September 1, 1898, says that after forty years' experience he still held a well-nigh hopeless opinion regarding the curability of this disease. He did not believe it could be positively predicted that, under the influence of any known drug, a cure could be effected. If the case present an inflammatory type, the most soothing applications should be used at first, and they are appropriate from time to time, in every case, to meet conditions of hyperemia. In cases of the acute multiple type, these milder measures are all that the skin will tolerate He derived far more benefit from these soothing applications in the long run (*e.g.*, black wash, zinc oxide, and calomel washes, zinc paste). Among the more stimulating preparations were mentioned sulphur ointment, zinc oxide and sulphur wash, white precipitate ointment, and lactic acid. Later on, iodo-glycerin and mercurials had proved beneficial in his hands. Creosote, carbolic acid, pyrogallic acid, chrysarobin, and remedies of that class were the most severe that he used. He had seldom resorted to the use of the curette, or to cauterization. He had attempted to annihilate certain areas on the trunk by the use of fuming nitric acid, but had seen the disease recur beyond areas so treated. The number of complete and permanent cures that he effected was sadly small.

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ORIGINAL CONTRIBUTIONS.

A SIMPLE BUT SUCCESSFUL TREATMENT OF LEG ULCERS.

BY J. HOWE ADAMS, M.D., OVERBROOK, PA.

It is no uncommon thing to meet with ulcers of this kind which have been in existence for ten or fifteen years or even longer; the writer has one patient who has been a sufferer from this trouble for eighteen years. They are common among our laboring classes, and frequently are the bane of the dispensary surgeon; they form a large part of all ulcers which come under the physician's notice. They well deserve the name of "chronic ulcer," under which term they are sometimes classed.

In appearance an ulcer of this kind is of a variety of shapes; it may start round, oval, or irregular in outline, and assume either of the other forms before its course is terminated. The edges of the ulcer, or ulcers, for they may be multiple, are sharply defined, being either inverted or everted. The granulations are generally pale and puny on appearance, or they may be totally absent. On the other hand, occasionally they may be redundant; if so, they are flabby, unhealthy in character, and saturated in a watery serum. The sensibilities are generally very much dulled. The parts around the ulcer are thickened and indurated; the transudation having gradually ripened into connective tissue, has formed a dense wall compressing the blood-vessels and preventing the free approach and egress of blood; the veins, becoming dilated, give to the surrounding tissues a dark-red, purplish, or bluish coloration. The skin is often eczematous in the vicinity, or is glazed, smooth, and shining, while in old people it is frequently of a drab or dirty brown.

There is an old superstition that these ulcers perform a vicarious duty for the system; for example, a number of the older writers have

cited cases where the vicarious duty of menstruation has been ascribed to these ulcers. The most remarkable case of this kind is probably that of Mason, who tells of a negress who ceased to menstruate at thirty-two, when blood flowed from an ulcer of this nature at the time when her menstrual flow was due. The majority of observers agree now, however, that this is a mistaken idea; Agnew states that in the course of many years he never saw such a case, nor did he believe that such cases occurred.

As to the cause of these ulcers, there is a general belief that they are not dependent on constitutional causes; when we glance at the sturdy Irish men and women who have these ulcers we can see that no general condition is involved. Of course, exposure, carelessness, uncleanliness, etc., are the agencies which operate to prevent healing; but they are not the exciting causes. The strong predisposing cause is undoubtedly a varicose condition of the leg. When the veins of the leg, as the radicals of the internal saphenous or the external saphenous, become dilated, their trunks tortuous, and their valves useless, the embarrassment to the venous circulation causes a congestion of the capillary circulation. In this way there is maintained a constant factor of inflammation, which on the slightest provocation, such as a cut or bruise, sets up an inflammatory process which quickly passes on to ulceration, and thus an injury which would prove to be trifling in a sound leg will, in one with imperfect veins, be followed by an ulcer which may prove difficult to heal. These ulcers may form without the history of any injury; the thinning of a wall of a vein may go on to such a degree that inflammation of the overlying skin is established and an ulcer appears, apparently spontaneously; or the vessel may give way, attended with a profuse bleeding, and leave, after the vessel is closed, an ulcer in the vicinity. It is in this variety of ulcers that eczema is more common.

The question of causation is of importance when we come to the subject of treatment; for on our conception of the cause must depend our procedure. The success or failure of the treatment of indolent ulcers depends not on the ulcer but on its surrounding walls; it is not the quality of the blood that is at fault, but the quantity. Working along this line the degree of success in the treatment of these cases may be marked. I will first give the classical form of treatment, and then the special variety that in my hands has proved especially efficient; it is not original with me, but its use seems confined to a few physicians, which emboldens me to present it to the readers of this journal.

The classical treatment followed in Philadelphia has been that of Agnew, which is as follows: First, he ordered the parts to be thor-

oughly cleansed. For this purpose the patient was directed on his return from work in the evening to place his leg in a bucket of warm bran-water—that is, water in which a small bag of wheat bran has been immersed for a short time—and allow it to soak for an hour; then wipe it clean and dry, and envelop the parts in a towel wet in warm water or a lotion of boric acid, and cover with oiled silk. The same course should be pursued for two or three consecutive evenings. The idea of the water-bath and dressing was to macerate and soften the indurated tissues about the ulcer, by which a more perfect circulation is established; this marginal induration must be dispersed before any stimulating applications to the surface of the ulcer are of any avail. The next step in Agnew's treatment required the hand of the physician; a piece of patent lint doubled on itself and large enough to extend three inches beyond the surface of the ulcer is soaked in warm water containing a little alcohol and placed over the part and covered with oiled silk; then a roller bandage is applied with great care to the leg and foot. This dressing should be reapplied every four or five days until the granulations begin to crop out. Then Agnew applied an adhesive plaster dressing preliminary to the dressing; for this purpose he encircled the limb with adhesive strips two inches wide, commencing one inch below the ulcer and terminating two or three inches above. The plasters began two or three inches away from the ulcer and terminated the same distance on the other side, crossing the ulcer regularly and overlapping the preceding roller one-third. Then a roller bandage was applied. In this way firm and continuous support was given to the vessels of the leg. The adhesive strips were left on for a week, while the roller bandage was to be removed every two days and the secretion which came through wiped off. Of course, if the ulcer became painful and the discharges profuse, they were removed sooner. The application of a little zinc ointment around the edge of the sore generally prevented the spread of any eczema by defending the skin. This plan in the hands of careful surgeons has been fairly successful. It is used largely by the old pupils of Agnew, who number several thousand.

There are a variety of other treatments for these sores, such as incising the ulcer by making two lateral incisions, one on each side, down to the fascia, until the tissues are free; after which the ulcer is said to go on to healing with great rapidity—it is stated generally within a few weeks. Of course, if the patient can be kept in a recumbent position with the leg horizontal it would heal nicely. The only objection to this treatment is a vital one: the ulcer is apt to return when the patient gets on his feet again. Other surgeons treat the ulcer with stimulating applications, such as the tincture of myrrh and

water in equal parts; or, if painful, soda and laudanum wash, consisting of one part of laudanum, two of liquor sodæ chlorinatæ, and ten of water. This application should not be allowed to dry.

Being unable to put patients to bed or to change their occupations —in fact, having but little control over their movements—we have adopted the following plan with almost invariable success; occasionally we find a patient doing better on some other form of treatment, but fully ninety per cent get well following our simple directions. The patient is ordered no preliminary bathing for his leg; the average patient with this complaint does it in a very perfunctory manner, so that we get along as well without it as with it. His leg and ulcer is cleansed at once with a bichloride solution of the strength of one to a thousand, and then the ulcer is douched with a spray of peroxide of hydrogen. The sore is then covered with strips of Lister's green protective in the following manner: Beginning at the bottom of the ulcer the first strip is placed on, being about a half-inch wide and long enough to cover the ulcer horizontally. The succeeding strips are placed one above the other, overlapping each other; this arrangement of the strips is important, for in this way all irritating discharges are carried out on the protective and drained away. If the strips begin at the top, the secretion will be drained back on the surface of the sore. Over this dressing—which should not be made of the cheaper thick protective, which is worse than useless—is placed an antiseptic dressing, or the so-called "antiseptic poultice," which is simply a thick layer of antiseptic gauze wet with a solution of bichloride. This should not be covered with any oiled muslin or silk, for this only serves to convert the dressing into a hot poultice.

Now comes the distinctive part of the treatment, which consists in the application of a tightly fitting figure-of-eight bandage to the leg and foot. By using this bandage instead of the ascending spica we get a firm, even pressure, which will be easy to keep up. The figure-of-eight of the leg stays on much better than anything else; the patient can attend to his regular duties and it will cause him no trouble or annoyance. This dressing should be renewed every other day until the sore disappears, which generally occurs in the course of four to six weeks. By this plan of treatment the ulcer is protected against its own irritating discharges, the wall of congestion and inflammation is broken down, the venous circulation is supported, and the flow of fresh nourishing blood to the part is constantly maintained. In this way are all the indications met, and success usually follows. But treatment should not stop as soon as the ulcer is healed, for in that case it will speedily return when the leg is left to its own resources. Many authorities recommend at this juncture the

use of an india-rubber stocking; but these stockings are expensive, they are heating, and they rapidly lose their elasticity in spots, so that they hold tight in one place and sag in another. There has been recently devised a rubber bandage which is cheap, easily applied by the patient, and is durable; it is known to the drug trade as the Randolph bandage, and worn by the patient has proved the most satisfactory yet produced.

There are cases which seem to do better on other treatment. For example, I have in mind several cases that recovered with the use of zinc ointment applied on lint and the figure-of-eight bandage. Of course, when the case is intractable to any treatment, the question of excision of the veins comes up. Dr. La Place in a recent article has given his results with this treatment, and they are excellent; but we have been so successful with the treatment outlined above that we have had no occasion to use such a radical plan, and this is in a dispensary where ten to twenty-five cases are constantly on hand.

TWO CASES OF APPENDICITIS, ONE REQUIRING RESECTION OF THE ILEOCAECAL COIL.

BY WM. BISHOP, M D., BAY CITY, MICH.

In offering a brief description of the following cases I do not aim to point out anything new, but to show the unique combination of surgical details necessary in each case.

To begin with, the cases demanded a transportable emergency outfit imitating, as near as possible, the furniture, dressings, and instruments found in one of the more modern aseptic operating-rooms of well-equipped hospitals.

Our city of 40,000 people has never enjoyed the advantages of a hospital, and consequently all surgical procedures are carried out in private residences, where our nurses are accustomed to quickly arrange a room for the purpose.

Case 1.—W. K——, male, aged twenty-two, born in Ireland. Family history: Father at fifty-five had extensive necrosis of the left tibia requiring surgical intervention. Personal history: Diseases of childhood, such as mumps and chicken-pox. Always indulged in athletic sports. Never sick until present attack, which began on March 12, 1898, with the exception of a "bellyache" on February 6, 1898, lasting two days. In consultation with Dr. Swantek on March 17, 1898, I saw patient in the fifth day of attack. While in the theater on March 12 he was seized with general pains in abdomen, with slight vomiting. Given morphine subcutaneously. During the night had

chills and sweats; temperature 100° F. These symptoms continued daily until I saw him late in the evening of the 17th, when I found him, while slightly under the influence of morphine, to have some pain and exquisite tenderness at "McBurney's point." Dulness over quite an area of the right inguinal region. Temperature 101½° F.; pulse 120; clammy skin. Operation imperative was my advice, but arrangements could not be made until nine o'clock the morning of the 18th.

Assisted by Drs. Swantek and McLurg I made an incision through the abdominal wall, which was followed by a copious discharge of pus. Digital examination disclosed the abscess cavity to extend back to the loin and downward along the bladder. After cleansing the cavity with decinormal salt solution, a pair of blunt-pointed scissors was introduced into the wound and made to bulge out in the loin space as far back as possible without sufficient force to break down adhesions, when an incision was made down to the scissors' point. A good-sized drainage-tube was inserted into the anterior opening and brought through the incision into the loin. A second rubber tube was placed down alongside the bladder, together with a milk of iodoform gauze. Silkworm-gut stitches approximated the greater part of the first incision. Sterilized gauze and cotton dressings; bandage. Patient in good condition upon leaving table. The next day the pulse was 90, temperature 99°; sweating stopped; pus in small quantity.

Patient steadily improved until the 27th, when I was summoned with Dr. Swantek to note the evacuation of the entire contents of the intestines through that part of the tube protruding at the loin. I advised operation the following day, for the reason that it was impossible to keep the discharges cleaned up owing to lack of intelligent nursing, and from the fact that *all* the feces passed through the loin. In addition, I did not want to have a chronic fistulous tract established, and my patient was in the best of condition to stand any operation. Most of my medical friends advised waiting.

On March 28, assisted by Drs. Swantek and Landon, I reopened wound, found another pocket of pus, isolated the diseased region with properly placed gauze pads, and dissected up omentum (two inches thick and gangrenous), under which I found the appendix, whose lumen had entirely disappeared and was now a bluish, thickened cord. At the side of the appendix was a hole in the cæcum three-fourths of an inch in diameter, together with several smaller areas of gangrene. The appendix was freed from its mesenteric attachment and excised; the excision included that part of the cæcum which had ruptured and also all suspicious spots which might subsequently rupture. The mucous membrane was united with interrupted silk sutures; peri-

toneum and muscular coat united with a continuous silk suture; silkworm-gut sutures for abdominal wound. Rubber drainage-tubes; sterile dressings. Uninterrupted recovery. Ventral hernia.

Case 2.—Victor L——, aged eighteen; Canadian. Employed in box factory, where on January 7, 1898, he was struck on the abdomen in the right inguinal region by a board being thrown forcibly back from a circular saw. Patient "wilted" to the floor, face became blanched, and a short period of unconsciousness supervened. Patient in bed two weeks suffering from peritonitis. Resumed work for several periods after January 30, every two or three weeks having to desist from work for a few days at a time, owing to pain and tenderness in the right inguinal region. Bowels almost habitually constipated, requiring enormous doses of cathartics and the use of enemas to get a satisfactory movement. On May 12, 1898, when I saw the patient, he had just recovered from one of his attacks of peritonitis, and complained but slightly of pain and tenderness in right inguinal region, where was located a hard mass as large as an orange and immovable. Bowels constipated. Temperature 98⅓°; pulse 80. I did not countenance the patient's history of traumatism, and considered the case one of ordinary recurrent appendicitis with thickened adherent omentum.

At operation an incision was made over the mass, which when exposed showed a hard mass of thickened omentum and adherent ileocæcal coil. As I have so often accomplished the location of the appendix by dissecting up the adherent omentum, I tried to follow the same practice in this case, but was soon convinced that the omentum and bowel had become so intimately adherent that they could not be separated without rupturing the bowel. No course seemed open to me, and I stood baffled for an instant, when it occurred to me to excise the whole mass with the included bowel. The excision included several inches of ileum and all of the cæcum. The lower end of the large bowel was closed and an incision made into the outer side of the large bowel, into which incision one-half of a Murphy button was inserted, the other half being introduced into the lumen of the ileum. My idea in closing the lower end of the large bowel and placing the button in the outer side was to make up the loss occasioned by the removal of the ileocæcal valve. Patient bore the procedure rather well, pulse being 120 and temperature normal at the end of operation. The pulse remained fast and the temperature high (101°) for one week. Bowels moved on the fourth day, food of a liquid character and in small quantities having been given on the third day, beside the nutritive enemas, which were begun on the first day and continued until the tenth day, when the button was passed. On the eleventh day through a stitch-hole abscess was discharged quite a quantity of

fecal matter, which ended in the entire contents of the bowel coming through the wound by the fifteenth day.

May 30, eighteen days after the first operation, a secondary operation was performed, consisting of the isolation of fistulous tract (which, fortunately, commenced on the anterior wall of the bowel, the button having united all but about half an inch on the anterior surface), the repair of the bowel with the Czerny-Lembert suture, and the placing of an omental graft over this. The region became infected and I was bothered with pus, but despite this accident the case progressed favorably, the bowel uniting and the pus quickly disappearing, so that by July 10 the patient, wearing a suitable abdominal support, was again at his work in the box factory.

This last case was interesting to me inasmuch as I did not begin the operation with the idea of excising bowel, but to excise the diseased appendix and the usually diseased portion of omentum.

A CASE OF TRUE PNEUMONIA IN TYPHOID FEVER—CRISIS IN PNEUMONIA AS SHAPING TREATMENT—CARDIAC ASTHMA.

BY J. M. DA COSTA, M.D., PHILADELPHIA, PA.

TRUE PNEUMONIA IN TYPHOID FEVER.

The case which I present is that of a serious complication in typhoid fever. The man when admitted was delirious and had signs of double pneumonia. It soon became evident that the pneumonia was complicating typhoid, as was shown by the appearance of spots and the positive reaction of the Widal test. For five days it seemed that recovery was impossible, but under the persistent use of oxygen inhalations and stimulants he gradually rallied, until now he is out of danger. For a time stimulants were pushed, so that he was given seven drachms every second hour. Strychnine in the dose of one-fortieth of a grain every fourth hour was also given, and on one or two occasions one one-hundred-and-fiftieth grain of atropine was used.

This case illustrates the extreme uncertainty of prognosis in typhoid fever. According to all the symptoms this case would have been a fatal one. In regard to the association of pneumonia with typhoid fever it may be said that we rarely see pneumonia. Congestion of the lungs is common and is frequently spoken of as pneumonia. *True* pneumonia, as we undoubtedly had in this case, as shown by the physical signs and the subcrepitant râles heard now, is very rare. Marked congestion, then, is common, and consolidation seldom seen. But more frequent than either of these is bronchial catarrh. This is so frequent that it can hardly be called a complication, but is to

be looked on more as a part of the disease. This does not add to the gravity of the disease, while congestion adds much, and real consolidation is almost always fatal. This case fortunately is an exception.

Now as to treatment in this case. As a circulatory and respiratory stimulant strychnine was given. Great benefit was derived from the use of the oxygen inhalations. Stimulants were used as freely as the digestion would allow. Locally not much was done. The patient was so weak that baths were out of the question. A plan which I often use in such cases was adopted with good effect—that of sponging with hot alcohol. This reduces the temperature, which in this case was close to 105°, and also acts as a stimulant. It will be found to be a good substitute for the bath in these cases of extreme weakness.

CRISIS IN PNEUMONIA.

Our second case is one of true pneumonia. The temperature chart shows a typical termination of the disease by crisis. A systolic murmur was heard when the patient was admitted, and this still persists. What does a murmur of the heart mean in pneumonia? In a great number of cases a cardiac murmur is heard when the disease is developing, but is of no significance and disappears on recovery from the pneumonia. Here this is not the true explanation, as there was a somewhat vague history of heart trouble when the patient was admitted. As a rule when the patient has heart disease pneumonia is a grave condition, but fortunately here the patient seems to be doing well. Because of its previous good effect in cases where the pulse was very strong the tincture of veratrum viride in five-minim doses was given every fourth hour in this instance with good results. I am very partial to its use in such cases and I find it very helpful. In addition he was given carbonate of ammonium, stupes were applied, and he was dry-cupped.

As to the crisis in pneumonia, when it is as marked as in this case, one should be on the alert. This is a time when there is a marked change in the whole system, and faintness and exhaustion are apt to be very great. The patient should be kept warm by hot cloths or hot-water bags. Give stimulants if they have not been used before, or if they have, increase the amount. I am very apt also to give quinine at these times, and strychnine sometimes does admirably.

CARDIAC ASTHMA.

The man showing this condition is a sailor of sixty-eight. He has had dyspnea every second day for a period of two months. He has no chest pain; the liver dulness is slightly increased; the urine contains a few casts and no albumen. There is fatty degeneration of the heart,

as shown by the feeble first sound, beginning arcus senilis, and casts. Confirming this are atheromatous radial arteries. We are giving the man belladonna, three drops in a drachm of syrup of wild cherry, and also one drop of a one-per-cent solution of nitroglycerin three times a day. At first he was given iodide of ammonium, and this would be good treatment, but it will be stopped while the others mentioned are being taken.

DISEASE OF THE FRONTAL SINUS.*

BY ADOLPH O. PFINGST, M.D., LOUISVILLE, KENTUCKY.

This patient presents a condition which in the last few years has gained considerably in importance, viz., disease of the frontal sinus. These cases have been known and studied more or less for a number of years, but it is only of late that much importance has been attached to the subject and that it has been recognized as a frequent factor in frontal headache.

The most common form of inflammation of the frontal sinus is that accompanied by a serous exudation, the simple catarrhal inflammation, and I take it that the headache so frequently occurring in connection with a cold in the head is often due to an accumulation of fluid in the sinus. Pus formation, though rare, has also been noted in the frontal sinus, our patient representing a case of this kind, in which spontaneous perforation of the bone and soft parts has taken place.

Exceptionally the fluid collecting in the frontal sinus is a very thick, dark brown, stringy mucus (mucocele). I observed two such cases during my service in Dr. Knapp's hospital in New York. They usually run a slow course with little or no symptoms, causing by their pressure an absorption of the supraorbital bony plate and perforation at its thinnest portion at the inner and upper angle of the orbit, and forming a soft swelling which usually displaces the eye outward.

The cause of the latter variety of sinus disease is obscure. The serous exudation, as I have mentioned, accompanies colds. Pyogenic infection of the sinus must to my mind take place from the nose, traveling up through the infundibulum and setting up suppuration. Some writers claim that the condition may originate spontaneously or from some constitutional trouble, as syphilis or scrofula. Some cases have been attributed to traumatism. It is not uncommon for the affection to occur in the course of influenza. Whatever the exciting cause may be, a factor of much importance in the etiology is an occlusion of the nasal passages from some cause, the most frequent being hypertrophy of the mucous membrane, polypi, and deflection of the

* Reported to the Falls City Medical Society.

septum. It is the rule for but one sinus to be affected, although both may simultaneously be diseased.

The most pronounced symptom of inflammation of the frontal sinus is headache referred to that region. In simple catarrhal inflammation this is the only symptom to lead to a diagnosis. In abscess formation this pain may become intense, increasing in severity with the accumulation of pus until it begins to discharge through the natural opening —the infundibulum—into the nose. If the flow is obstructed spontaneous perforation into the orbit may bring about partial relief of the distressing pain. The headache, with tenderness on pressure over the sinus affected, are the symptoms of most value in the diagnosis. The continued headache may be accompanied by mental depression. Where pus is discharging through the infundibulum and can be seen flowing over the anterior extremity of the middle turbinated bone, the diagnosis is made easy. Perforation of the bone and distention of the soft parts of the orbit, or perhaps perforation, as in our case, would naturally make the diagnosis easy.

Treatment should be directed primarily to the nasal passages. Pathological conditions which might obstruct the flow of fluid into the nose should receive immediate attention. If polypi are present they should be removed. Hypertrophic tissue should be removed and deflections corrected. The opening of the infundibulum should be carefully probed if possible. I would say, however, that this is usually impossible, as the opening of the canal is situated far back and its course often tortuous. Along with this treatment, steam inhalation and nasal sprays of some antiseptic solution to loosen caked secretions are of benefit. This treatment in fact will suffice in catarrhal conditions which usually get well in a few days. The application of heat over the sinus by means of poultice usually adds to the comfort of the patient. These measures often suffice to relieve symptoms in acute abscess. If they fail to bring about free drainage and the symptoms persist, the cavity must be opened from without and thoroughly cleansed, establishing at the same time drainage into the nose. Earlier operators accomplished this by making an opening through the roof of the orbit at its inner angle just beneath the supraorbital ridge. In latter years the operation suggested by Ogston and Luc, of opening the sinus above the supraorbital ridge, has been almost universally adopted. An incision is made along the border of the supraorbital ridge from the supraorbital notch to the median line down to the bone; another incision is extended from this up the median line from the nose for about one to one and a half inches; the triangular flap is turned back, and a button of bone removed with trephine close to the median line. The cavity is then cleansed of

granulation tissue, the frontonasal duct probed and enlarged, and a self-retaining rubber catheter inserted, the wound then being sutured.

This man gave a history of having received a blow upon the left side of the vertex of the head. Soon afterwards he began to have dull pains over the frontal region of that side, and a month after the injury a spontaneous perforation took place just under the supraorbital ridge, a little to the nasal side of the middle of the orbit. The frontal sinus was irrigated for some time through this fistulous opening until the patient finally applied for admission into the city hospital, where the resident physician, Dr. Ross, and myself performed a radical operation. An incision was extended under the supraorbital ridge from the fistulous opening to the root of the nose, close to the inner canthus of the eye. From this point an incision was extended upward, leaving a pointed triangular flap, which was raised and the periosteum detached. The opening through the bone was enlarged with a chisel towards the inner angle of the orbit until the opening would admit the little finger. The walls of the sinus were scraped as thoroughly as possible with a sharp spoon, a large quantity of granulation and polypoid tissue being removed. A curved cannula was then passed downward into the nose and the opening enlarged with a sharp spoon, establishing a free communication between the nose and the sinus. The wound was pared and sutured, leaving a small metal drainage tube at the lower angle.

After two days the tube was removed and the wound allowed to close. In a week the patient left the hospital. I have seen him off and on since then and noticed a discharge of pus through the nose; to-day, after six weeks, this has almost ceased, and the man suffers no discomfort. Since the patient left the hospital he has been on large doses of iodide of potassium, a history of syphilis eight years ago prompting me to this treatment. He has a scar so slight that it is hardly perceptible.

The operation below the supraorbital ridge was preferred in this case on account of the presence of the fistulous opening at that point. The result has been equally as good as by the higher operation, and the scar no doubt is less perceptible. Nevertheless, the supraorbital operation should be one of selection, as it is difficult as a rule to enlarge the frontonasal duct from the opening below the ridge.

NOTE.—The patient was seen on November 20, 1898, about three and a half months after the above report was made. He had an attack of frontal headache of one day's duration since his discharge from the hospital. Otherwise he has been comfortable. No discharge could be seen in the nose.

THE RELATION OF SO-CALLED NERVOUS DISEASES TO MENTAL ALIENATION.

BY W. B. LYMAN, M.D., MENDOTA, WISCONSIN.

After three years of constant observation of the insane, under close supervision, and an examination of probably 1600 cases, I ask myself the question, Is there a more intimate relation or association of so-called nervous diseases amongst them than of other parts or organs of the body? Does not the mere fact that the brain, the organ of the mind, rests in a large, bony cavity continuous with the spinal column containing the spinal cord, possibly in some way give color to the prevailing impression that mental and nervous diseases are allied? Or, is it possibly the fact that gray and white matter—cells and fibers—form the component parts of both structures? Observation certainly teaches that the gross changes causative of many nervous diseases certainly do not exist more frequently amongst the insane than the sane, and a case of insanity, caused by gross pathological change, cannot but be called merely a symptom of the condition. Of the vast number of insane, indeed, the strenuous efforts of pathologists have been unable, in the slightest degree, to unravel the cause, and in only those cases of progressive insanity have they found an atrophy of some of the cells or fibers—the only tissue change—except possibly evidences of chronic active or passive congestion of the membranes. All modern thought tends toward the material, and, in common with it, we must presumably seek within the brain the cause for mental aberration. Yet what evidence is there that the passions, the temperament, the emotions—any of which gone awry constitute insanity and form the basis of the most insane thought—are inherent in the brain structure alone or in part? Is the gloomy foreboding, the anxious fear, the self-incrimination of the melancholiac, existing because of his feelings holding full sway over his every thought and act, due to a brain condition? Or are they inherent in structure other than brain fiber?

We all acknowledge the gloomy pervading of an inactive or diseased liver, or of a diseased and incompetent heart—a condition differing from pronounced melancholia only in degree. Why, then, should we, when this feeling reaches the intensity to govern—irrationally—thought, seek at once its cause in the mental structure? May not this sense of good or ill feeling, named mania or melancholia, regardless of its intensity, arise from chemical processes elsewhere than in cerebral structure? He who is depressed can think only thoughts in harmony with his feeling. So with him who is elated. It is impossible for them

to do otherwise, strive as they may. How vainly many of us have often striven to change the tone and tenor of the silent, pervading thoughts to no purpose!

However this may be, it cannot be gainsaid that the insane are no more liable to disease of the lower nerve structure than the sane, and they present no more cases. History often shows eccentricity in manner or disposition from childhood, but cases of chorea and infantile paralysis are no more frequent. That there is close alliance between epilepsy and mental disease cannot be gainsaid. If for the moment we lay aside those cases of insanity which arise with perverted feeling as a basis, and take under consideration the etiology of those that present irrational thought, controlled by inherent instability of structure possibly—or, if not instability, possibly excessive development of structure giving the prevailing character to the actions and thoughts —we find little that we can consistently associate with the diseases of the lower nerve centers.

By the lower nerve centers I refer to those belonging to mankind as an animal, which are called into use in following the animal instincts largely. The warp and woof of individual mental structure, resulting as it does from transmitted development due to racial and family environments, modified only measurably by the immediate environment of the individual himself or herself, is the result of ages, while the nerve centers have, during all this time, attained no higher development. It seems illogical to me that because one is mentally alienated through an overdeveloped bump of conceit, or of avarice, or erratic propensities, that he is therefore more liable to disease of the so-called nervous system. In fact, such people usually live a long life without any apparent physical ailment, being the victims only of incoordinate thought, not of incoordinate movements. Functional diseases so called—in fact, nearly all—partake of mental characteristics, this being the explanation why the various faith-cures are credited so much in remedying them. But gross pathological change, as is evidenced to exist in physical disease, involving the cord and its appendages, is not demonstrated to exist in the brain as a cause of insanity. True, indeed, it is that when it does exist mental symptoms appear, but these cannot be properly insane any more than the typhoid case or acute anemia with delirium.

With the great amount of original research, and the modern skill and instruments of precision in prosecuting this work, I think it fully demonstrated that further search for manifest pathological change in the insane as causative of the mental symptoms is useless. We must realize the higher structural composition that is yet beyond the ken of man—a structure built on a different plan—a structure molded by

thought, not molded for thought, the basic structure existing in all alike, but the quality, the molecular arrangement, being individual, handed down to us through posterity; adding our little mite in turn, we pass it on for better or worse, handing down to our offspring and visiting on them the good as well as evil of our individual effort and environment. Thus age after age, generation after generation, we go on building up and tearing down, arranging and rearranging mental structure, independent of the lower nerve centers that simply aid us or are the connecting lines between thought and action.

Evident it is, then, that the loosely knit mental structure need manifest no pathological textural change to account for ill-balanced and perverted thought and action due to asymmetries in the building of the multitudes of thought centers and thought tracts; for truly no two minds can see things alike, and while the result of cerebration is often to arrive at similar conclusions, it is usually after very different individual impressions and comparisons.

This, to my mind, is the true pathology of mental disease; not gross structural change, but ill structural building, beginning possibly generations ago, or possibly environment for which the individual is not properly constituted. If this were granted, it must readily be granted that the lower nerve tracts and centers and their diseases are very little dependent on or related to true mental disease.

According to the *Philadelphia Medical Journal* the steamship *Golconda*, belonging to the British India Company, arrived at Plymouth in Christmas week and was found to have on board of her a man suffering from a mild attack of bubonic plague. The man was at once detained in hospital, but the ship was allowed to proceed to London, where she was met by Dr. Collingridge, the medical officer of the port of London, and Dr. Bulstrode, of the Local Government Board. The usual processes of thorough disinfection were carried out, and no other cases were discovered among the crew or passengers, although a syphilitic subject with glandular enlargement was exalted into a victim of bubonic plague by some enterprising lay journalist, and "paragraphed" as such. Seeing that the *Golconda* started from Calcutta, which is just now perfectly free from plague, and called at no infected port between Ceylon and Marseilles, it was at first sight difficult to understand the origin of the infection in the undoubted case of plague put ashore at Plymouth, but close inquiry showed that a passenger who had recently been down with the plague was on board, and it is supposed that he brought some infected clothes with him.

CORRESPONDENCE.

ACTIONS FOR MALPRACTICE.

To the Editor of THE MEDICAL AGE:

The recent experience of Dr. McGraw and the previous experience of Dr. Walker and others suggest the question whether the medical profession cannot initiate some action looking to its own protection and that of others liable to similar attacks. If such suits should become epidemic—and a success or two might cause them to—physicians would be compelled to decline all practice in surgery.

No reputable surgeon wishes to be relieved from just responsibility, but we certainly cannot afford to risk so great professional and financial damage, if the best service that can be rendered is to result in a malpractice suit whenever a beastly ingrate can be made to believe, by an equally conscienceless attorney, that there is opportunity for speculation.

Would it not be a great safeguard if the conditions for practice in either the Circuit or Supreme courts should be that the attorney should have no personal interest, direct or indirect, in the case other than an unconditional fee? I submitted this idea to a capable lawyer, and he indorsed it heartily, saying that the greatest source of meritless litigation lay in the fact that unprincipled attorneys work such cases on shares or conditions.

At first view this would seem like robbing the lawyer of the right of self-defense in case he became a party to a suit; but in fact it would simply compel him to employ an attorney like his opponent and meet him on something like equal terms in the matter of expense.

W. C. HUNTINGTON, M.D.

HOWELL, MICH.

ACCORDING to the *Medical Record*, Drs. Lange and Melzing, of Vienna, have succeeded in taking photographs of the mucous membrane of the stomach in the living subject. A stomach-tube, sixty-six centimeters long, with a diameter of eleven millimeters, is introduced, having at the lower end an electric lamp and at the upper end a camera. The stomach is first emptied and washed and then distended with air. Then fifty pictures can be taken in rapid succession in from ten to fifteen minutes. By turning the apparatus on its own axis all parts of the mucous membrane can be pictured. The photographs are about the size of a cherry stone, but of course they can be enlarged to any extent.

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A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE STATUS OF VACCINATION.

Science has borne its share of the white man's burden and has not infrequently reaped its poetic recompense in "the blame of those we better, the hate of those we guard." Nowhere, perhaps, is this better shown than in the instance of vaccination. It is doubtful if science ever conferred a richer boon upon humanity, and it is doubtful if there is one single scientific fact which stands so absolutely and incontrovertibly true as this one concerning the protective value of vaccination. Nevertheless, on all sides is heard the voice of the skeptic. On the other side of the water he has assumed the euphonious title of "conscientious objector," and as such becomes the mouthpiece of that section of the community tainted by the contagion of his delusions. So, with a faith in vaccination that experience elsewhere shows us in a popular sense is in danger of decay, it is not surprising to find a medical writer warning us that at the present day smallpox is endemic in a large number of our great cities, and that in some it may almost be considered epidemic. There is as yet, fortunately, no sign of any wide-spread revulsion of feeling against the use of vaccination, and it is to be hoped that the good sense of the community will preserve it from becoming the victim of any such calamitous legislation as that which has recently been enacted in England. It may be, however, that a false sense of security is making us careless in the employment of prophylaxis, and that the supreme importance of vaccination is in danger of being ignored.

There are certain facts about smallpox and vaccination that are so entirely beyond dispute that they cannot be too plainly impressed on the public mind. There is no doubt that the mortality of smallpox is much less now than in prevaccination times. The greatest diminution of the smallpox mortality is found in the early years of life, in which there is also the most vaccination. In countries where there is much

vaccination and revaccination—relatively to the population—there is very little smallpox. In classes among which there is much vaccination and revaccination, there is little smallpox. Where smallpox prevails it attacks a much greater proportion of the unvaccinated than the vaccinated, especially where the vaccinations are comparatively recent. Even in houses invaded by smallpox, not nearly so many of the vaccinated inmates are attacked as of the unvaccinated. The fatality-rate among persons attacked by smallpox is much greater among the unvaccinated than among the vaccinated. It cannot be said that smallpox is a milder disease than it was in former centuries. Where vaccination is uncommon, as in many tropical regions, smallpox is as furious in its epidemics as it ever was. All evidence points to the conclusion that while sanitation may account for something, it does not account for all these facts. The diminution of smallpox is due to vaccination, and not to sanitation, and those communities which neglect this precaution have again and again been shown to be courting the possibility of disaster of the gravest kind.

Were any evidence needed of the value of vaccination, the experience of Germany should be sufficiently striking to convince the most rancorous unbeliever. In 1871, with a population of 50,000,000, she lost 143,000 by smallpox. In consequence of this she enacted a compulsory vaccination law of a vigorous type. To-day her death-rate from smallpox is only 116 a year. During the Franco-German war the imperfectly vaccinated French army lost 23,000 men by smallpox. The better vaccinated German army lost only 278. Other examples might be quoted by the hundred, but all would demonstrate but one truth: that smallpox is a preventable disease by virtue of vaccination, and by vaccination alone.

When any deeply-rooted prejudice manifests itself, it is always wise to inquire whether there is not some basis for its existence. Probably the most potent reason for the prejudice against vaccination lies in the trouble and discomfort it occasionally causes. The sore arms are convincing to some, and the occasional cases of septicemia shatter the faith of multitudes. The former ought to be avoided as far as possible, and the latter condition should be accounted in these days an unjustifiable accident. Among the important facts illustrated by the recent vaccination statistics of the Kingdom of Bavaria is the value of glycerinated lymph. An admixture of glycerin is proved not only to preserve the power of the vaccine, but also to destroy the harmful microorganisms which may possibly be associated with it. Once make vaccination an aseptic process, and much of the prejudice against it will disappear, for the prejudice is undoubtedly but an expression of a deep human instinct which primarily manifests itself in a desire to avoid pain.

EDITORIAL NOTES.

Periodicity in Insect Bites.

Mr. Dawson Williams, according to the *Science Monthly*, has put on record an observation which must strike as true those who have suffered much from the bites of the mosquito. This is that in many susceptible persons there is a periodicity in the effects that follow a sting. The immediate result, he says, is a small, flattened wheal, pale, and surrounded by a zone of pink injection. This is attended by itching, but both wheal and itching are gone in less than an hour. About twenty-four hours later the part begins to itch again, and in a few minutes a hard, rounded, deep-red papule appears, and is quickly surrounded by an area of edematous skin. The formication is intense, and in the affected area, while the ordinary sensations of touch are dulled, those of temperature and painful feelings are exaggerated. In two or three hours the itching diminishes and the edema disappears, leaving a small, red papule, which itches but little. The phenomena recur, with diminished intensity, in the course of another twenty-four hours, and may return in this way, growing fainter all the time, in four or five daily repetitions. After these returns have ceased, a small, indolent papule may persist for weeks or months. This periodicity is not observed in all subjects, but most generally in those who suffer most.

Men and Women in Abdominal Operations.

The old question is being again discussed as to whether men or women best stand abdominal operations, and this time the infallible dicta of statistics are invoked. Professor Tarnier tells us that in 117 cases of gastroenterotomy in the male there was a mortality of fifty-four per cent, while in 96 cases in the female it was only thirty-five per cent, a difference of nearly one-fifth. In pylorectomy the mortality in the male and female figured at sixty-four and fifty-three per cent, again an advantage for the female. The reasons advanced for this sexual peculiarity are various. The tolerance which women display to abdominal interference is perhaps accounted for by its relation to the pregnant state. Better habits may account for much, and flaccidity of the abdominal walls may lead to more accurate diagnoses of diseased conditions. The question most probably is one which will find its explanation in some deeply rooted reason of inheritance, whereby the female secures her immunity to abdominal interference.

ITEMS AND NOTES.

THE plague has broken out in southern Formosa.

THE English colony at Rome will open a hospital there.

CHRISTIAN SCIENTISTS will soon erect a temple in Baltimore.

OHIO UNIVERSITY has decided to create a medical department.

THE bubonic plague has appeared at Port Louis, Mauritius.

BEHRING has made an application for a patent for a serum to cure consumption.

PARIS has enacted some special laws to prevent infection in bacteriological laboratories.

THE six hospitals of Dawson City are at present full, and the number of sick is greatly on the increase.

DR. JOHN L. IRWIN has been nominated a health commissioner of the city of Detroit by Governor Pingree.

YELLOW FEVER has attacked the Two Hundred and Second New York Regiment in camp at Guanajay, Pinar del Rio, Cuba.

EXCHANGES tell of a young woman in Minnesota who can distinguish absolutely no color, everything to her being pure white. As a consequence she is compelled to protect her eyes against the glare.

A ST. PETERSBURG physician finds that the application of an ointment of ten parts of ichthyol and eighty parts of lanolin prevents pustulation and abbreviates the cutaneous manifestations in smallpox.

PROFESSOR WILLIAM OSLER, F.R.S., of the Johns Hopkins University, Baltimore, has accepted an invitation to deliver the Cavendish lecture for 1899, before the West London Medico Chirurgical Society.

IN both Stockholm and Christiania influenza is prevailing in severe form. In Berlin also the disease has attacked large numbers and has greatly reduced the attendance at the court balls and other official and social functions.

THE University of Aberdeen has lost one of its most distinguished and most highly appreciated teachers by the death of Dr. Alleyne Nicholson, M.D., F.R.S., the professor of natural history, whose works on zoology and paleontology are standards. He died on February 19, aged fifty-five years.

Last December, for the first time in the history of the Berlin University, the doctor's degree in philosophy was conferred on a lady. Fraulein Elsa Neumann, the candidate in question, was examined in physics by Professors Plank and Warburg, in mathematics by Professor Fuchs, and in physiology by Professor Dilthey.

According to the *Medical Record* a German chemist has made a careful analysis of many samples of cigarette papers, and says that dangerous substances like copper, arsenic, and oxide of lead are present in cigarette paper in such infinitesimal quantities that the average smoker would in twenty-five years inhale only one gramme of them.

Dr. Negro, of Turin, has succeeded in curing one hundred out of one hundred and thirteen cases of sciatica by digital pressure over the painful part. The pressure is applied with all possible force for fifteen or twenty seconds and is repeated for the same length of time after an interval of a few minutes. In many cases six treatments are all that is necessary.

The death of Dr. Dumontpallier, of Paris, has caused general regret. The cause of death was pernicious influenza. Notwithstanding his seventy-five years, a few weeks ago he made a long speech at the Paris Medical Academy. For several years he was "chef de service" and clinical professor in the Paris hospitals. The author of several works, he devoted the last twenty years of his life to the study of nervous diseases.

An international congress on tuberculosis and the methods for combating it will be held in Berlin from May 23 to 27, 1899. The Imperial Chancellor, Prince Hohenlohe, will preside, and will be supported by an influential committee, headed by the Duke of Ratisbon and Professor von Leyden. Five divisions of the subject have been agreed on: (1) Propagation, (2) Etiology, (3) Prophylaxis, (4) Therapeutics, (5) Sanatoria.

A medical congress of hygiene is to be held at Como, Italy, in 1899, in connection with which there will be a solemn commemoration of Volta. Professor Baccelli, Minister of Public Instruction, has been named honorary president of the Organizing Committee, which also includes the names of Professor Bizzozero, Senator of Italy, and Professor Golgi. An exhibition of hygiene will be held in connection with the congress.

The death is announced of Dr. Camille Dareste, professor at the School of Anthropology. He was best known for his researches in

embryology and was practically the founder of the science of experimental teratology, while his researches on the artificial production of monsters created very wide-spread interest. He was formerly the professor of medicine at Lille, and some fifteen years ago came to Paris as director of the school for higher education.

ACCORDING to the *New York Medical Record*, two children were born recently to a woman in an Irish hospital, but they lived only a few days. The hospital physicians, it is said, desired a post-mortem examination on the twins, but the father objected, and gave orders to have the children put in a coffin and taken to his home for the funeral. Just before the burial the coffin was opened for some reason, and was found to be filled with shavings and other waste material.

LEPROSY is said to be spreading to a marked extent in Livonia and Courland, Russia. The military authorities in these districts have been compelled to reject for the army many young men found to be infected with the disease. It is found to be exceedingly difficult to confine the disease to any one district, as the Norwegian authorities have found to their cost. It is a very serious thing that this complaint should apparently be establishing for itself another European center and should be displaying so much activity. More than five thousand cases are already reported from Russia.

ACCORDING to the *British Medical Journal*, M. le Jeune, a member of the Belgian Government, has introduced in the Senate his long-promised bill for the diminution of inebriety. The principle of the measure is gradual reduction of the number of places for the sale of alcoholic liquors. Only those cabarets open on November 8, which were licensed when the Commune allowed one to every thirty inhabitants, will be interfered with. The maximum number of cabarets will be 1 to 150 inhabitants in communes of under 10,000; 1 to 200 in from 10,000 to 20,000; 1 to 250 in from 20,000 to 50,000; and 1 to 300 where the population is over 50,000. By the provisions of the bill the cabarets of Brussels would be reduced to one-tenth of the present number—that is, to 700—and the sale of absinthe would be entirely prohibited.

AT a recent meeting of the Academie des Sciences de Paris, Phisalix (*Philadelphia Medical Journal*) detailed the results of some experiments that he had undertaken to determine the value of mushroom juice as an antidote against serpent venom. He had been led to investigate this juice by the fact of its containing a considerable quantity of tyrosin, which is the chemical nucleus of all albuminous bodies when extracted from the juices of serpents, and which pos-

sesses a great power against their venom. It was found that mushroom juice is in reality of decided value as an antidote to these venoms. If the juice of the ordinary hotbed mushroom be extracted by pressure or maceration in water, and be injected into a guinea-pig, the animal is rendered immune to serpent venom. The juice itself, however, has toxic properties varying in accordance with the size of the dose, twenty-five cubic centimeters being fatal to a rabbit, which dies of intravascular coagulation. Filtering and boiling the juice diminishes but does not destroy its toxicity.

At the regular annual meeting of the Tri-State Medical Association of Mississippi, Arkansas, and Tennessee, held in Memphis December 20, 21, and 22, 1898, the following resolutions were adopted:

Whereas, the medical laws of the various States have been so perverted by political influences as to give legislative sanction to grotesque, ignorant, and dangerous sects of pretenders and charlatans; and

Whereas, the privileges granted to one of the most outrageous aberrations, namely, the so-called osteopathy, constitute a disgrace to the States in which the "osteopathists" are legally entrenched; and

Whereas, a certain William Smith, osteopathist, having been roundly denounced, together with his sect, by William Warren and The Medical Age, now brings suit against both for $25,000 damages; therefore,

Be it declared the sentiment of the Tri-State Medical Association of Mississippi, Arkansas, and Tennessee that William Warren and The Medical Age are entitled to the sympathy of its members and of all medical practitioners; that we wish and expect them to enjoy a complete triumph in repelling this legal assault; and that wheresoever a powerful house takes a bold stand in opposition to quackery it promotes the interests of legitimate and honorable medicine and the welfare of humanity.

The First Medical Fee.—This is the subject of an interesting paper by Bombaugh in the *Johns Hopkins Hospital Bulletin*. The first medical fee of which he finds special mention was one recorded by Herodotus as given by Darius to Democedes of Crotona, a slave of Orœtes, and consisting of two pairs of fetters of gold. In his day, in Greece, the usual fee paid to physicians for incidental visits was very small—in fact, not more than two groats, 16 cents, or about one-thirtieth of the customary fee in England in our time, one guinea. It was customary for physicians to be engaged by the year by the municipality, and paid from public funds. According to Pliny, Cleombrotus received 100 talents for his treatment of King Antiochus—$121,875 if the Attic talent is meant, $156,000 if the standard coin of the Ptolemies. Every Greek city had not only one or more public medical men in the municipal service whose duty it was to visit the sick in the city and suburbs, but there was also a large dispensary, "iatrium," where the practitioner, aided by his pupils, held consultation, performed operations, and distributed medicines. Beds were reserved for patients who could not be removed, or for very serious cases.

The *New York Times* recently gave the following example of Christian Science: Mrs. —— was the pretty young wife of a clerk. Her mother was a maniacal Christian Scientist. When it came time for Mrs. —— to be confined, the husband was told he might go to his business, and the mother (mother-in-law) took the case in hand, aided by a Christian Scientist healer. The poor girl began to suffer, and the fool women put a Bible on her abdomen and told her that her pains were all imagination, that the Lord never gave people pain, and so on, *ad nauseam.* The agonies of that poor child must have been terrific, for neighbors heard her screaming and begging for a physician, but these Christian fiends never let up. Finally the pain stopped; no further screaming was heard. The reason was that the child had ruptured the womb and was in the abdominal cavity of the mother. Then there was rushing in mad haste. The husband was sent for, the physician was sent for. But too late! The woman died of hemorrhage and the child choked to death. Two murders! But were these women prosecuted? Not a bit of it. Public sentiment was entirely on their side, and no official dared to issue a warrant. "It was God's will to take his dear ones that way," said the minister (not a Christian Scientist) at the funeral.

At the meeting of the Paris Academy of Medicine (*Lancet*) held on January 24, M. Laborde, the head of the physiological department at the Faculty of Medicine, presented a report upon some work done, together with M. Jaubert, embodying a discovery which apparently possesses great practical interest. The report dealt with a chemical preparation which by one and the same operation removes the carbon dioxide from respired air as well as the watery vapor and other expired products, and also restores the exact quantity of oxygen which has been used up. In a word, this substance by simple contact with respired air gives back all its primary properties. According to M. Laborde and M. Jaubert three or four kilogrammes of this substance allow a man to live twenty-four hours in a confined space without any renewal of the air from outside. Experiments made upon guinea-pigs shut up under bell-glasses have been very satisfactory. Other experiments have been made upon human beings by means of a mask so constructed that it allows the passage of air, regenerated by means of M. Laborde's apparatus, to the respiratory tract. This discovery would appear to have a great practical use for persons obliged to work in irrespirable media, such as miners, firemen, sewermen, and divers. M. Laborde considers that his invention will also be applicable to submarine boats.

NEW PUBLICATIONS.

DISEASES OF THE EYE.

This already popular handbook presents many new and important features in this, its third, edition. The author has the rare gift of imparting knowledge without using an unnecessary sentence, which places his readers at an immense advantage. The work is strikingly original and should be read not only by students and practitioners, but by the specialist, who will find in it much that is new and valuable. Particular attention has been given to the important relations which microorganisms bear to many ocular disorders. The publisher has presented this work in admirable form. It is well printed and admirably illustrated.

Diseases of the Eye. A Handbook of Ophthalmic Practice, for Students and Practitioners. By G. E. De Schweinitz, A.M., M.D. Third Edition, Thoroughly Revised; 255 Illustrations. Philadelphia: W. B. Saunders.

FEVER NURSING.

In this little book the subject of fever nursing is discussed from the standpoint of the physician, with a view of teaching how fever patients are to be cared for, and also why they must be cared for in particular ways. The work is exceedingly practical in its spirit and discusses the subjects treated of in a clear and lucid manner. A large number of interesting charts are added to the text. The book will be valuable not only to nurses, but also to those who wish to direct nurses.

Practical Lessons in Nursing. Fever Nursing: Designed for the Use of Professional and Other Nurses, and Especially as a Text-book for Nurses in Training. By J. C. Wilson, A.M., M.D. Third Edition, Revised and Enlarged. Philadelphia: J. B. Lippincott Company. London: 36 Southampton Street, Strand.

THREE THOUSAND QUESTIONS.

The purpose of this little book might not at first sight be appreciated. It has been prepared by a medical man with a view of helping the student to quiz himself on all the important branches, or review any subject in which he feels himself to be particularly deficient. For the purpose of self-examination this little book will undoubtedly be of great value to the student.

Three Thousand Questions on Medical Subjects Arranged for Self-Examination. With the Proper References to Standard Works in which the Correct Replies will be Found. Second Edition, Enlarged. Philadelphia: P. Blakiston's Son & Co., 1899.

BRUBAKER'S PHYSIOLOGY.

Dr. Brubaker's Compend of Human Physiology appears in a ninth edition with new illustrations and a table of physiological constants. Its use to the student is attested by its vigorous life.

A Compend of Human Physiology. Especially Adapted for the Use of Medical Students. By Albert P. Brubaker, A.M., M.D. Ninth Edition, Revised and Enlarged. With New Illustrations and a Table of Physiologic Constants. Philadelphia: P. Blakiston's Son & Co., 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Forcible Straightening of the Spine to Correct the Deformity of Pott's Disease.

A. M. Phelps, in the *Post-Graduate* for February, 1899, says that the question of forcible straightening of spinal curvatures occurring in tuberculosis of the spine has been recently revived from an old practice, as old almost as the history of medicine, revived and practiced by Hippocrates 500 years B.C., and again revived in the sixteenth century by Pere.

The conclusions at which the author has arrived are these: That ankylosed spines of old standing, with a large kyphosis, should not be operated upon. Cases with large abscesses should be avoided. Cases of osteomyelitis after the abscess has been evacuated would promise more than tubercular cases. The cases in which he would expect to have good results are beginning kyphosis, cases of recent standing, cases unattended with abscesses, or cases in which the abscess had already discharged, in which a small kyphosis was present, all cases of beginning paralysis or even advanced cases with paralysis, not due to invasion of the spinal canal by the disease. Cases of lumbar disease are more favorable than dorsal.

The indiscriminate work which will be done in the future by individuals incapable of selecting their cases or actuated by other motives will relegate the operation to the obscurity in which it has slept for more than twenty-four hundred years.

That the operation is a useful one and will save many a child from a crippled life and a premature death the author has not the slightest doubt, and as time goes on the profession can speak from their ripe experience and formulate rules which will be infallible guides to scientific work. By doing as has already been done, and is being done, in some of the diseases and deformities classified as orthopedic, empiricism and charlatanism will be stamped with an appropriate brand.

Chronic Appendicitis the Chief Symptom and Most Important Complication of Movable Right Kidney.

G. M. Edebohls, in the February number of the *Post-Graduate*, concludes from his experience that:

Chronic appendicitis is present in from eighty to ninety per cent of

women with symptom-producing movable right kidney. This frequency constitutes chronic appendicitis one of the chief, if not *the* chief, symptom of movable kidney.

Chronic appendicitis, by reason of its frequency, the protracted suffering, and serious impairment of health which it entails, and the dangerous possibilities of implanted acute attacks of appendicitis, may be considered the most important complication of movable right kidney.

The writer's statistics show that twenty per cent of all women have movable kidney or kidneys; that four per cent of all women have symptom-producing movable kidney or kidneys; that four per cent of all women have appendicitis; that while three and one-half per cent of all women have both symptom-producing movable kidney and appendicitis, only one-half per cent of all women have appendicitis and well-anchored kidneys. The startling nature and importance of the conclusions to be drawn from these statistics do not invalidate the latter.

Satisfactory investigation of the relations of movable kidney and appendicitis became possible only after the discovery and elaboration of the writer's method of palpation of the vermiform appendix. It remains impossible to those not practically familiar with the method.

Chronic appendicitis may be the only symptom of movable right kidney.

Some of the symptoms commonly ascribed to movable kidney are often in reality due to the concomitant appendicitis.

Treatment of Aneurism with Subcutaneous Injections of Gelatin.

At a session of the Académie de Médecine at Paris, October 11, 1898, M. Lancereau reported upon three patients successfully treated with subcutaneous injections of gelatin. Two of these patients suffered from aneurism of the aorta, and the third from aneurism of the right subclavian. Lancereau's solution consists of two grammes gelatin to 100 grammes salt solution. The injections, consisting of 200–250 grains, are repeated until the disappearance of the aneurismal sac. These injections are only of undisputed advantage for curing sac-shaped aneurisms, and not in cases of spindle-shaped dilatations in the entire circumference of an artery, for in such cases the all-important condition for the completion of the fibrin deposits, viz., the flowing of the blood, is lacking. Huchard witnessed the cure of an aneurism of the aorta by fifteen similar injections, as also the immediate cessation of hemorrhage from the lungs in tuberculous patients.

At the session held on October 25, the writer placed certain restrictions upon the innoxiousness of the treatment. Boinet, of Marseilles, published the particulars of a certain case in which injections of gelatin gave rise to a contraction of the pulmonalis and later to tuberculosis. Bart again witnessed the death of a patient in collapse after such injections. Although the cases above cited demonstrate the coagulating power of gelatin in lieu of serum, still they indicate also the dangers to which patients are exposed by such injections. Therefore a stronger solution than one per cent should never be administered, and great care taken that it does not result, as in the case quoted, in anemia of the brain, due to the large deposit of coagulated matter near the source of the larger arteries.

The Distribution and Origin of Tuberculosis in Children.

L. G. Guthrie (*Lancet*, Feb. 4, 1899), after an analysis of over seventy cases, arrives at the following conclusions:

1. Thoracic tuberculosis in children is more common than abdominal in the proportion of three to two.

2. Tabes mesenterica as a cause of death in young children is practically unknown.

3. The preponderance of thoracic over abdominal tuberculosis is not necessarily and solely due to the direct entry of bacilli into the air-passages. In addition to this mode of infection the lungs may be affected: (*a*) by bacilli entering the thoracic glands through the lymphatics of the pharynx, tonsils, and esophagus above, and through the lymphatics of the intestines and the abdominal glands below; and (*b*) by the entry of bacilli through the thoracic ducts into the pulmonary circulation *via* the right heart.

4. Primary infection through the alimentary tract does not prove that food has been the sole source of evil. Therefore tuberculosis in children is not likely to be materially checked by purification of milk-supply alone.

5. The alleged increase of tuberculous meningitis of late years is probably due to pulmonary tuberculosis set up by severe epidemics of measles.

Surgical Hints.

The February number of the *International Journal of Surgery* contains the following valuable hints:

In retropharyngeal abscess it used to be advised to empty the abscess first with a trocar, in order to avoid flooding the larynx with pus and causing suffocation. If we can open the abscess with a knife,

while the patient's head is lower than his body, in the position adopted for feeding intubation cases, the danger is avoided and the opening will be more thoroughly done.

In severe pain in the testicle occurring in old men, if we can exclude the presence of inflammation due to the ordinary infectious conditions, inquire into the possible presence of gout. In this disease an attack occasionally begins in the testicle, and gives rise to excruciating pain. Colchicum in full doses is a specific for this. Heat is usually grateful to the patient. Cold applications are not indicated.

In cases of strangury occurring in old men, after operations upon the rectum, the condition may sometimes persist for two or more days, especially if there is any prostatic trouble or urethral stricture. This may often be cut short by leaving the catheter in for a few hours. There is no danger in this if our asepsis has been thorough. It is also important to remember that in such cases we may remove only a small part of the urine contained in the bladder. To avoid this percuss the bladder as soon as the urine stops flowing. If we have reason to believe that any urine is left, we should turn the patient over on one side, and we will often see several ounces more gushing out quite fast.

A Case of Ileocolitis Simulating Intussusception in a Child Aged Six Years.

E. W. Graham, in the February number of the *Archives of Pediatrics*, reports a case in which the conditions were as follows:

A child with weak muscles, poor digestion, and habitual constipation; a relaxed condition of the mucous membrane above Houston's valves. To these predisposing causes to prolapse of mucous membrane were added the active ones of proctitis with swelling, infiltration, inflammation of mucous membrane, and tenesmus. The prolapsed membrane entirely occluded the lumen of the bowel at the position of Houston's valves as far as the passage of fecal matter was concerned, but allowed the passage of gas.

The main facts leading to the non-diagnosis of intussusception in the case were as follows: Absence of abdominal tumor; absence of distention of the abdomen; absence of severe recurring paroxysmal pain; passing of gas by bowel; no evidence of marked prostration.

The fact that in about one-half the cases of intussusception the tumor is either felt in the rectum or protrudes from the anus, makes the recognition of the condition reported here important.

The writer states that he was unable to find in any text-book or journal mention of obstruction of the bowel being caused by conditions such as existed in this case.

Treatment of Strictures.

Ramon Guiteras, in the January number of the *Medical Review of Reviews*, says that treatment of stricture of the urethra may be summed up in a few words. Every stricture that is permeable and yielding, and can be dilated up to the normal size of the urethra, should be treated by this means. The normal size is to be determined by examination, and if the meatus is too small to allow this to be ascertained it should be cut. If strictures do not yield to dilatation, they also should be cut.

Dilatation should be accomplished by sounds, dilators, or bougies. In recent soft strictures sounds are excellent. In strictures that are yielding, though of denser consistence, dilators are preferable. A dilator can be passed easily through a stricture, and can then be opened to any size, as indicated by the dial on the handle of the instrument. This affords the best graduated method of dilating strictures with which the writer is acquainted. They can be stretched from one to two millimeters at each sitting. The Oberlander dilator is usually considered the best.

MEDICINE.

The Conduct of the Heart in the Face of Difficulties.

Sir Wm. Broadbent, in an address before the London Medical Society (*Medical Press*, Jan. 8, 1899) said that the difficulties which the heart has to face are sometimes of its own making, sometimes imposed upon it from outside. An overdistended stomach, for example, pushes up the diaphragm and presses upon the right ventricle; the heart is carried to one side or other of the chest by effusion into the pleural cavity, or more rarely is displaced by a mediastinal tumor or aneurism; or the flow of blood towards the right auricle may be impeded by pressure on the superior vena cava. Difficulties of another kind may arise from obstruction in the arterioles and capillaries—in the pulmonic circulation by emphysema, or by acute affections of the lungs; in the systemic circulation by the numerous conditions which give rise to high arterial tension.

The heart adjusts itself to altered conditions in a wonderful fashion. It may be so much displaced by effusion into the left pleural cavity or by traction from a shrunken right lung that its beat is felt as far out as the right nipple, and yet we can trace very little inefficiency in the functional action. Time, however, is an element in this accommodation. The same degree of displacement occurring suddenly, as in pneumothorax, will be attended with severe dyspnea, and

great distubance of the action of the heart will be occasioned by sudden and capricious distention of the stomach.

Angina pectoris is one of the cardiac affections which may be closely simulated by the effects of dilatation or functional derangement of the stomach. The first question to be put in the case of cardiac pain of anginoid character is as to the circumstances under which it comes on — whether as an effect of exertion or during repose. The earlier attacks of true angina are practically always provoked by exertion, while spurious angina is specially liable to come on during repose. It is true that angina when established may come on in the night, or may be induced by the act of undressing and the contact of cold sheets, but there will be a history of attacks during exertion. Pain and a sense of suffocation may also be brought on by the pressure of the abdominal viscera reenforcing that of a distended stomach on lying down, whether the heart is diseased or sound, and a weak heart may actually be brought to a standstill in this way. Speaking generally, angina pectoris in a woman is always spurious, and the more minute and protracted and eloquent the description of the pain, the more certain may one be of the conclusion. Again, when palpitation or irregular action of the heart, or intermission of the pulse, or pain in the cardiac region, or a sense of oppression follows certain meals at a given interval, or comes on at a certain hour during the night, there need be little hesitation in attributing the disturbance, whatever it may be, to indigestion in one or other of its forms. Nightmare from indigestion is not a bad imitation of true angina. So, also, if any cardiac symptom or pain can be walked off, it may usually be set down as functional, and due to some outside disturbing influence or to nervous irritability. The same may generally be said of intermission of the pulse, of which the patient is conscious, and, though with less confidence, of irregularity of the heart's action—if the patient feels it the irregularity is usually temporary, and not the effect of organic disease.

Bacteriological Study in the Etiology of Yellow Fever.

P. E. Archinard, with the assistance of R. S. Woodson and John Archinard, contributes to the *New York Medical Journal* of January 28, 1899, a very interesting article on this subject, and from the work of these gentlemen the following conclusions are drawn:

1. In a large proportion of autopsies (thirty-two times in thirty-nine) of yellow-fever cases of 1897, in New Orleans, a bacillus was found either in a pure state (two times) or in association (thirty times), similar to the Sanarelli bacillus icteroides. This bacillus has

some points in common with the coli communis, but differs from it in some of its essential characteristics.

2. In live blood taken from the veins of the elbow, in well marked cases of yellow fever, they were able to isolate their bacillus four times in five cases.

3. In the exhaled breath mixed up with secretions from the mouth and nose (sometimes bloody) they isolated their bacillus twice in twelve cases.

4. In the scrapings of the surface of the body of the sick, principally face, neck, in the upper part of thorax, they isolated their bacillus two times in every twelve cases.

5. Their bacillus injected intravenously into the rabbit, and subcutaneously into the guinea-pig, in large doses, from five to ten cubic centimeters of a bacillus culture, is always fatal, and sometimes very quickly. In smaller doses (one to two cubic centimeters) the animals are made sick, but generally recover. The animals that die show characteristic lesions of the liver, kidney, and stomach. Cultures from these organs give pure growths of the inoculated bacillus.

6. Their bacillus is identical in almost every respect with Sanarelli's bacillus icteroides obtained from himself, and from Dr. Sternberg, but differs somewhat in its cultural aspects from Sanarelli's description of his bacillus.

7. The blood of yellow-fever cases or of recent convalescents from this disease agglutinates the bacillus icteroides of Sanarelli, and also the authors' bacillus, in over eighty per cent of the cases, in the proportion of one part of serum to forty of culture, within one hour. In less than twenty per cent the reaction does not take place.

8. The blood of typhoid and dengue with eruption and malarial fever when properly diluted, 1 in 40, does not agglutinate the bacillus icteroides or their bacillus except in exceptional instances.

9. The blood from a number of diseases other than yellow fever when properly diluted, 1 in 40, does not react on the bacillus icteroides or their bacillus.

10. Normal blood properly diluted, 1 in 40, does not agglutinate the bacillus icteroides or their bacillus.

11. The blood of persons who have had yellow fever seems to retain its agglutinative power for a number of years. The great majority of the cases tested by the authors who had had yellow fever in 1878 gave the reaction. Those who had had yellow fever previous to 1878 gave blood which possessed no agglutinative power with bacillus icteroides or with their bacillus.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

The True Function of the Thymus.

J. Beard contributes a very interesting article on this subject to *The Lancet* of January 21, 1899. He says that in 1891 Gulland stated that the first leucocytes of the body arose in the mesoblast in the neighborhood of the thymus. One cannot help wondering whether or not he put the further question to himself, "Whence do they come?" At any rate, he gave no correct answer to the query, and the first reply to it is contained in the present communication. It is Kolliker's great service to have shown that leucocytes arise in the thymus from its original epithelial cells; to Gulland's researches we owe the result that the first leucocytes are found in the mesoblast in the neighborhood of the thymus; and finally, it has fallen to the author's lot to show that the first leucocytes arise in the thymus from its epithelial cells, and that thus it is the parent source of the leucocytes of the body. The last link of the chain binding the whole together has now at length been forged, and that this is so may be shown in another way. Is there any other probable source of leucocytes in the vertebrate body? The answer to this question must now be a most decided negative, and for the following reasons:

1. When the first leucocytes arise in the thymus epithelium there are no leucocytes and no lymphoid structures of any sort in any other part of the body. The first or parent leucocytes by their wanderings quickly infiltrate the blood and most other parts of the body. From this it follows that if a lymphoid organ arises later elsewhere it will always be impossible to prove that it did not take its origin from some of the leucocytes or their progeny which originally came from the thymus. If a new outbreak of an infectious disease occurs in a street at a time when in another part of the street the same illness has already manifested itself, the latter or its original source is considered sufficient to account for the fresh cases. The white races of America are descended from ancestors who emigrated from Europe, and no one would dream of enunciating the idea that the white inhabitants of, say, a western prairie village had arisen *de novo in loco*.

2. No other lymphoid organ is known which in its developmental history resembles the thymus. Attempts have been made by Retterer and others to prove such a mode of origin of lymphoid structures in the case of the tonsils, parts of the alimentary canal, and the bursa

Fabricii of birds, but these have all one after the other been disproved by an able embryologist and histologist, Professor Philip Stohr.

3. The thymus alone is sufficient to account for all the leucocytes of the body, and since Schaffer demonstrated its existence in Marsipobranchiate fishes—a discovery which the author can confirm—we now know it to be an organ characteristic of all true vertebrate animals.

4. Except in the case of organs which are paired or form parts of a metameric segmentation, we do not seek for two organs with the same function in any vertebrate animal. The thymus is a paired, metamerically repeated organ if the gill region be metameric, but its development is confined to that region in all known cases.

THERAPEUTICS.

The Action of Silver Nitrate on the Urethral Mucous Membrane.

At a recent meeting of the Berlin Dermatological Society Dr. Le Casper (*Medical Press*) spoke on this subject.

The speaker had made experimental observations as to whether the instillation of strong solutions of silver nitrate produced permanent cicatrices in the urethral mucous membrane. Observations on the human subject were not at hand, as scarcely any surgeon had the opportunity of investigating anatomically the urethra of a patient who had been treated with silver nitrate. His experiments were on dogs and rabbits, and he employed one- to two-per-cent solutions, the injections being made in the usual way, and at the usual intervals of time. His investigations began in 1894. Thirty-five instillations were made on six animals, and two were killed at six months, two at nine, and two at twelve. On examination there were no traces of inflammation in either mucosa or submucosa; both layers were filled with nodules and flakes which were either silver or combinations of it. The flakes dissolved in potassium cyanide. In animals, on the other hand, that had fifteen one-per-cent solutions of chloride of zinc injected the epithelium was, in some cases, grown to the submucosa, in others the function of the epithelium was changed; the submucosa contained fresh round-cell deposits in some places, in others the mucous surface was destroyed.

Immediately after the silver application the upper layers of the mucous membrane were converted into a homogeneous brown cautery slough, and between the spots were collections of round cells. There were signs of inflammation also with deeper tissue layers. After four days nothing more was seen of the silver that had been applied, and

eight days after every trace of interference had disappeared. The speaker then passed on to the theory of the action of silver nitrate. It consisted in destruction of the upper layers of epithelium and consecutive irritation. The irritation was a deep action, so that silver fulfilled the indications that were supposed to render the newer preparations preferable. His investigations had shown that the fear that Gyon's instillation of silver would cause stricture was groundless. The old tried remedy had now its justification experimentally. The note was illustrated by excellent microscopic preparations.

Jambul in Diabetes Mellitus.

Smyth (*American Practitioner and News*) earnestly commends jambul to the attention of the profession as almost specific in its power of reducing the prominent symptoms of diabetes mellitus, and of improving the general condition of people suffering from this disease. He points out the fact that Stevenson and Christy demonstrated in the laboratory that jambul when mixed with starch and diastase arrests the production of dextrose, and also that Graser and Binz found that when administered to dogs in which artificial diabetes had been produced by phloridzin or by removal of the pancreas the production and excretion of sugar was reduced eighty per cent or more. He gives a long list of well known European practitioners who have used it successfully in their practice, and calls attention to the fact that the Hindus are familiar with it as a remedy in this trouble under the name "djocet." The author calls attention to the necessity of giving the drug a fair trial before reporting negatively upon it, of seeing that the preparation used is not made by the aid of heat or from old stock, of observing that some other disease is not present that interferes with results, and of being sure that the seeds are from the Java jambul. If these precautions are taken and the drug used in increasing doses, he assures his readers that "evidences of its beneficial effect will appear with a rapidity that is astonishing." Two cases are cited that came under his immediate observation. The first was that of a young man, aged twenty-four, who had all the symptoms of diabetes. He had been losing flesh rapidly and passing much sugar. In four weeks he had gained fifteen pounds; the urine was reduced in quantity, and only a trace of sugar was present.

Bromalin.

Karl Rohrmann, of Göttingen (*Merck's Archives*, January, 1899), reports favorable results from the application of bromalin, instead of alkali bromides, in a number of cases of epilepsy. By its means he

was enabled to reduce the number of the attacks, which when bromides were used could not be done; its activity also even exceeded that of the metalloidal bromides. According to the writer the toxic symptoms observed with the bromides are in no wise heightened, nor do any new symptoms appear; and no deleterious action on the kidneys and heart need be feared. He believes bromalin is destined to be an important remedy in the treatment of epilepsy, and that although it may not entirely supplant the bromides, it may do so in certain cases. Among these will be the ones in which potassium bromide has been of but slight effect, and in which some other remedy is desirable; also those in which the potassium bromide, though serviceable, causes disagreeable and even dangerous toxic symptoms. Herein bromalin will be particularly indicated. It is given in similar doses to those of the bromides, and the results, while equally good, will be unaccompanied by the symptoms, which, when a change is made, generally recede, or at least do not increase.

[Bromalin should not be confounded with bromelin, one of the active constituents of the pineapple, which is used under a patented process in the manufacture of a predigested beef extract.—Ed.]

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Cystic Calculus.

A specimen of stone removed by Dr. Pilcher at the Seney Hospital was recently exhibited before the Brooklyn Pathological Society (*Brooklyn Medical Journal*, November, 1898), which presented points of interest, especially with reference to the effects of foreign bodies within the bladder. The patient was a woman twenty-three years of age, whose personal history was negative, save for several attacks of acute articular rheumatism. Three years before she was admitted to the hospital she commenced to have pain in the lower portion of the abdomen, referred to the bladder from the very start. Before the operation she claimed it dated from a fall she had had from a wagon; the symptoms continued to grow worse, she had more pain in the lower portion of the abdomen, and complained of pain in the rectum, and some pain on defecation. The urination became more frequent, and just before the operation she was urinating about every hour, passed blood at times, and complained of the stream at the time of

urination stopping suddenly, followed by intense pain. Upon examination *per vaginam* a rubbing or grating sensation at the neck of the bladder could be felt on considerable pressure; the sound was introduced into the bladder and elicited the characteristic click. The incision was made through the vagina, the bladder was opened, and a large calculus, about the size of a large English walnut, was removed with considerable difficulty. Embedded in the calculus was found a hairpin, and the deposit seemed to almost entirely surround it so it was only projecting somewhat on one end. The specimen was broken or crushed in getting it out, because it would not come through the small opening made in the anterior vaginal wall. After the removal of the specimen the anterior wall of the bladder was closed and permanent drainage introduced through the urethra. The wound healed *per primum*, and there was no leakage whatsoever.

A Floating Kidney, Gall-stones, and Tubal Pregnancy in the Same Patient.

Ferguson (*Chicago Medical Recorder*, December, 1898) reports a unique case in which all of the above conditions occurred in the same person. The floating kidney was anchored, and the gall-bladder, which contained 114 gall-stones, was opened and drained. The patient made a good recovery and left the hospital in three weeks. Two days later, however, she had an attack of bilious colic, which symptom was repeated thrice at intervals. During the third and fourth attacks pain was also complained of in the region of the right ovary. Examination revealed tenderness in the region of the cystic duct, and a diagnosis of stone between the cystic and common ducts was made. *Per vaginam* a large, soft, boggy mass was felt, and pronounced extra-uterine fetation. The patient had menstruated just before leaving the hospital the first time, and later there was milk in the breasts. At the second operation a gall-stone was found as diagnosed, and this was pushed into the gall-bladder, which was incised at the site of the old wound, and removed. The pelvis was filled with blood, and the tube, containing a three and one-half inch embryo, was removed together with the placenta. The patient recovered.

Carbid of Calcium in the Treatment of Uterine Cancer.

Ries (*Chicago Medical Recorder*, December, 1898) takes up the subject of carbid of calcium, which was recently so warmly advocated by Ethridge in the treatment of inoperable cases of uterine cancer, and demonstrates the utter worthlessness of the remedy, as well as the dangers which may arise from its use. He shows that the action of

the carbid is due to the decomposition of the preparation on the addition of water (blood-serum) into acetylene gas and quicklime (CaO), which is further changed to slaked lime. Acetylene gas has absolutely no effect upon the tissues, but mixed with air it is highly explosive, and in contact with copper or brass forms an explosive combination, which precludes the use of instruments made of these materials. The action of quicklime is well known, having long been employed by irregulars and others in the composition of Vienna paste, etc., preparations which have generally been abandoned by the profession. Its effects are not limited by its own action, as is the case with nitric acid, etc., so that the depth of the slough produced cannot be estimated or regulated; the action is therefore liable to reach beyond the point intended and result in injury. Ries also shows that patients are not rendered more comfortable by the use of the carbid, nor is life prolonged. The author deplores the fact that, while no such claim is advanced by Ethridge, the idea is spreading among the profession that this remedy promises cure of carcinomatous conditions. This he fears will lead to further tinkering and loss of time in cases which, if subjected early enough to radical operation, might be saved.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Dermatitis Exfoliativa Produced by the Use of Chrysarobin; with Some Notes on Treatment.

J. M. Blaine, in the *Journal of the American Medical Association* of February 11, 1899, contributes the following interesting case:

J. D. M——, aged thirty-five years, in December, 1897, suffered from an attack of rheumatism lasting three weeks. This was followed in January, 1898, by an attack of psoriasis numilosis and punctata. He was treated with potassium iodide, beginning with fifteen drops after each meal and increasing fifteen drops every week for four weeks. Local treatment consisted in painting the spots twice weekly with a ten-per-cent solution of chrysarobin in traumaticin. After three weeks considerable dermatitis was found on the shoulders, chest, and back. A week later the patient complained of a freezing sensation, with general inflammation of the skin and beginning exfoliation of the epidermis. Temperature was 101°, pulse 100. The following day, July 20, temperature was 100°, pulse 94, and epidermis rapidly exfoliating on back and arms. July 22 temperature was 99.5°, pulse 90

ankles swollen, skin drawn tight, and he walked with great difficulty. July 26 the skin was coming off the palms and soles in large flakes, and patient was very nervous and exhausted. The scales fell off at the rate of one pint in the twenty-four hours. The patient slept on an average not more than two hours, on account of the great irritation produced by the loosening of the scale. In the hope of relieving the irritation and lessening the inflammation the permanent bath was ordered on July 28. Relief was instantaneous. His pulse and temperature became normal the same day. He remained under water thirty-nine consecutive days; skin quite smooth and epidermis reformed. The temperature of the water was at first hot, and then gradually lowered. At first sodium bicarbonate was used in the bath, but this dissolved the scales too rapidly and left the skin denuded and sore, so its use was discontinued. The water was changed twice daily. He slept in the bath, as the bed had no charms for him. His appetite remained excellent, and his bowels and kidneys performed their function regularly. He seldom asked for water to drink.

Herpetic Fever.

At a recent meeting of the Société de Hôpitaux, Renon (*Philadelphia Medical Journal*, Feb. 11, 1899) reported the case of a girl, aged eight years, who was suddenly seized with headache, nausea, and cough. On the following day the temperature was 100.4° F., and the pulse 120; there were some white points on the right tonsil, the pharynx was a little reddened, and bronchitis existed; there was a distinct zone of congestion at the base of each lung. The child complained of intense supraorbital headache. Influenza was diagnosed. On the third day numerous herpetic vesicles developed about the mouth and on the right cheek; fewer on the tongue, soft palate, and right tonsil. The general condition improved, the temperature lessened, and the signs of bronchitis disappeared. It was evident that the disease was not influenza, but an infection which had attacked the respiratory and digestive organs and terminated in the outbreak of herpes. Herpetic fever was diagnosed. On the fourth day the general condition was very good except for some nausea; fresh vesicles were seen on the left cheek, below the eyebrows, in the mastoid regions, and on the left index-finger. The latter consisted of a group of three vesicles on the dorsal aspect of the last phalanx immediately below the nail. This group was very painful. There was no albuminuria. On the sixth day there were two new vesicles on the left cheek and three on the right eyelid. The other vesicles were completely dried up except those on the index-finger, which were very

large and very painful. Recovery was not complete until the twenty fourth day. The interest in this case lies in the localization and persistence for twenty-one days of herpetic vesicles on the left index-finger.

Rare Symptoms of Iodism.

At a recent meeting of the Société Médicale des Hôpitaux, of Paris, Danlos (*Philadelphia Medical Journal*, Feb. 18, 1899) described some rare manifestations of iodism that had developed in a man aged sixty years. Seven and a half grains of potassium iodide taken one day, and fifteen grains taken the next, were followed by coryza, unpleasant taste, and painless symmetric suprahyoid tumefaction, not reaching to the parotid. On palpation there was slight tenderness, no edema, and the submaxillary glands were found swollen and somewhat tender. The administration of the iodide being interrupted, the manifestations subsided, but recurred on two subsequent occasions, immediately following the exhibition of the drug. Elimination of iodide by the patient was very slow, a trace appearing in the urine only at the end of two hours. Danlos also detailed notes of a syphilitic who was given forty-five grains of potassium iodide daily. After a lapse of ten days violent itching and an erythematous and bullous eruption developed. The iodide being discontinued the eruption persisted, the itching being so intense at the end of twelve days that the patient was prevented from sleeping. The eruption remained for six weeks after the cessation of administration of the iodide, disappearing after a ten days' exhibition of sodium arsenite. The eruption was a typical dermatitis herpetiformis, affecting the hands, face, ears, feet, trunk, and arms.

Syphilitic Roseola.

At the annual meeting of the Italian Society of Dermatology and Syphilography in December, 1898, Dr. Paolini (*British Journal of Dermatology*, January, 1899) made a communication based on his study of various cases of syphilitic roseola. He concluded that late roseola was not to be classed histologically with the early roseolar rashes, but was in reality an exudative lesion—in fact, a true diffuse gumma, simulating an erythema. He quoted Campana's statement that the syphilitic process is the same in all stages, but that in early cases the vasomotor phenomena are prominent, in later ones the exudative.

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ORIGINAL CONTRIBUTIONS.

RECENT PROGRESS IN CURETTING THE UTERUS AND IN OPERATING FOR LACERATION OF THE CERVIX UTERI.

BY WILLIAM H. WATHEN, A.M., M D., LL.D.,

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No department of surgery has made more rapid progress within the last few years than surgery of the uterus and its adnexæ *per vaginam*, not only in the performance of minor operations, but in operations for the removal of diseased structures in the pelvic cavity, for which laparotomies were formerly universally recognized as the only method of treatment.

When the medical profession properly appreciates the pathological conditions of the uterus for which curettage is indicated, and the pathology of cervix lacerations, etc., for which operations are also indicated, and adopts the modern technique in performing these operations, woman will be relieved of much suffering that she has been compelled to endure under past methods, and will often be cured of conditions which if let alone may result in diseases requiring heroic operations that may cause the death of the patient.

Operations for curettage and for laceration of the cervix are nearly devoid of danger if properly performed; and if in the selection of cases good judgment is exercised, the immediate and subsequent results are so nearly perfect that many women are restored to a condition of health, so far as the local disease and the reflex symptoms are concerned, nearly as perfect as before they had any disease of the generative organs.

One of the greatest difficulties the general practitioner encounters in understanding the simplicity in the performance of these operations is, that he has been taught to believe that the generative organs are enveloped in some mysterious way too difficult to be understood; and that in order to expose the uterus in such a way as to enable him to operate successfully he must use a variety of speculums, retractors, etc., all of which are unnecessary and complicate the operations. The uterus can be seen more distinctly by the proper use of the fingers with the patient in the lithotomy position than it can by any kind of retractors or speculums; and the operation for curettage, or laceration of the cervix, can be performed more easily, more quickly, and more perfectly by discarding these instruments.

The vagina being thoroughly washed with soap and water after the woman is on the operating table, and then disinfected, the technique of the operation of curetting is as follows: Use two small Péan tenacula, one holding the anterior and the other the posterior lip of the cervix. These instruments are so constructed that they cause but little traumatism, and hold the uterus so firmly that it can be pulled into any position desired. Then with a small spoon-shaped sharp curette the cervix is first curetted up to the internal os, which is easily tunneled through by scraping away the diseased structures, and then the curette falls without force into the uterine cavity. It is then carried to the fundus, which is curetted thoroughly, including the mouths of the Fallopian tubes. In order that all the diseased tissues may be curetted, the instrument should be carried over the entire surface of the uterus two or three times, which requires about two minutes. All the diseased parts now being removed, there are several ways of completing the technique. The majority of operators irrigate the uterus, using a reflux tube, with hot bichloride solution 1:3000 to 1:5000, and then lightly tampon the cavity with iodoform gauze, or leave the case without further interference. Again, after curettage, the uterine cavity may be wiped out cleanly, as is the practice of Ségond, by carrying iodoform gauze wrapped on a small dressing forceps into the cavity. Occasionally an operator swabs out the cavity with Churchill's tincture of iodine, with pure carbolic acid, or with equal parts of these two remedies. While these applications would usually do no harm, I hardly see where they can do any good, and I therefore exclude them from my practice.

But where curettage is done because of excessive hemorrhage, and where there is danger of immediate continuance of the hemorrhage, then the local application of Churchill's tincture of iodine might be indicated; but in these cases I always succeed in controlling the

hemorrhage by tamponing with iodoform gauze, or even with plain sterilized gauze. There is seldom any trouble in controlling hemorrhage following curettage of the uterus, if one knows how to properly apply the gauze packing. To do this requires a little tact, and it should never be applied, as is the custom with some operators, through an intra-uterine speculum. By holding the cervix with two Péan tenacula the uterus can be nicely packed with strips of gauze from one to two inches wide by using a bulbous-pointed but small curved forceps.

In no case is it necessary that the gauze should remain in the uterus longer than two days, and after its removal the vagina should be irrigated twice daily for a week by a 1:5000 bichloride solution, keeping the patient in bed four or five days, and allowing her to leave the hospital in a week or ten days. This is a precaution that I nearly always observe, but in my curettings in the clinic before the students of the Kentucky School of Medicine I allow these patients to be carried home in an ambulance a few hours after the operation; and I learn through my assistants that they cannot be kept in bed longer than one or two days, yet the results are about as good as in my private patients in the infirmary. This knowledge, and other facts, have suggested to me that probably most of these patients would recover about as well were they allowed to get out of bed and walk after the first day, unless they were very feeble before the operation, or the conditions were such that hemorrhage might be anticipated. Occasionally the uterine cavity may be irrigated with bichloride solution for a week after the operation, but I have never found this necessary.

We should be careful not to reinfect these patients by allowing infectious matter to come in contact with the vulva or vagina on such things as napkins, irrigation tubes, etc.

Just here I want to impress the fact that bulb syringes should never be used in any form of vaginal or uterine irrigation, because if they are aseptic when first used they will become septic after being used a few times, and positively so after the nozzle has been introduced into a septic cavity, such as the rectum or a septic uterus. The valve intended to prevent the water returning into the bulb never works perfectly, and some of the infectious matter is drawn back. A gum, a metal, or a glass irrigation vessel should be used, and the irrigation tube kept antiseptic.

The foregoing applies mainly to curetting for chronic endometritis, but it would be well to suggest the other conditions in which it is indicated, and likewise the conditions in which it is contraindicated. It is indicated in nearly every form of hemorrhage coming from the

cervix or the body of the uterus, either caused by malignant disease, or typical or atypical adenoma. Where there is a fibroid tumor in the uterine walls that is causing hemorrhage, and which cannot be removed, or it is not proper to remove it, the hemorrhage may often be satisfactorily controlled by curettage, adopting the same technique as used in curetting for inflammation.

Many women are curetted for conditions that cannot be benefited by this operation, but the disease may be intensified; and I have known several cases to die because of curetting when the operation was contraindicated. In no form of septic infection arising in the uterus, whether it be confined to the endometrium, the muscularis, or has extended outside of the uterus, or into the system, is curettage indicated, at least not further than to remove the decidual débris or dead tissue which has become infected, causing sapremia by the absorption of poisonous toxins; and such patients frequently have a mixed infection by the germs of putrefaction and suppuration. These dead structures can usually be removed with the finger, having dilated the cervix with the finger or a large Wathen dilator. If some of the secundines that are separated by the finger cannot be removed otherwise, they may be scraped out by a dull curette, or pulled out by any form of forceps, being careful not to injure tissue not separated. If the disease is confined to the endometrium, then Nature has thrown out a protecting layer of granulation tissue which prevents further infection. If a sharp curette be used, all the septic matter cannot be removed, and the granulation layer, which is the fortification against further infection, is destroyed; we may expect within a few days to have the sepsis extending outside of the uterus, and possibly it may have become systemic. If the disease has involved the parenchymatous structures, but has not gone beyond the uterus, curetting is contraindicated because it is a traumatism committed without doing any possible good; and where the disease has gone beyond the uterus, no matter where it may extend, curetting is positively contraindicated.

Without experience we would conclude that the best treatment for acute gonorrhea would be thorough curettage, but it has been demonstrated that this does not cure the disease; and in nearly every case in which it has been attempted, so far as I have been able to learn, there has been a rapid production of pus-tubes.

In operations for lacerated cervix the uterus should be curetted, because if the laceration is causing enough trouble to justify an operation, then we are certain to have either a chronic endometritis or uterine adenomata. The curetting having been completed, and the uterine cavity irrigated with bichloride solution, or wiped out with iodoform gauze, the Péan tenacula are carefully fixed in the anterior

and posterior lips directly opposite and at the point where we wish to make the cervical canal. By using a sharp knife the intracervical tissue is cut deeply through a little beyond the edge of the tenaculum, and below the apex of the laceration, and then by turning the blade the tissue is deeply denuded on that side down to the bottom of all cicatricial tissue. In bilateral lacerations we immediately apply the same method to the other side. This can be done in less than two minutes, and with an expert operator there is never any necessity for cutting out another piece. While denudation can be successfully performed with scissors, I cannot see why any one should not recognize the knife as superior.

One reason why operations for cervical lacerations are not more successful is that denudation is not extended under the cicatricial tissue. The bleeding is not enough to require a ligature or the use of hemostatic forceps.

While the world-renowned Emmett, who deserves more praise for teaching us the pathology and treatment of laceration of the cervix than any one else, still uses the silver wire, and begins the introduction of his suture at the apex of the triangle, I am sure that when any one reverses this method and begins at the base of the triangle, using a continuous suture of catgut, tying the suture at the base first, then after carrying it up to the apex with one or two reverses brings it to the base again and ties the needle end of the suture to the end left in the first tying, the superiority of this method will be readily recognized. In bilateral lacerations the other side is treated after the same fashion.

Having thoroughly curetted the uterus, it is now necessary to introduce a small drainage-tube or tampon with gauze for two or three days to prevent too much union of the cervical canal. The entire operation can be completed in ten minutes, and if there is no infection in the after-treatment, the results will be perfect in nearly every case. In about three weeks it is well to examine these patients, and if the os is too small, use a sound or a small dilator and gently separate enough tissue to make the os the proper size.

There is no use in arguing with people who contend that the results will not be good if we use a continuous catgut suture, for we can only decide such questions by actual experience; and I refer to my own work, private and public, to prove the truth of what I have said. And while in these operations no speculum or retractor should be used, and the uterus is drawn down toward the vulva, there is no use arguing against those persons who contend that this method will cause injury of the broad ligaments or the tubes, for I have operated in this manner several hundred times and no trouble has resulted.

While I keep these patients in bed for a week or ten days, I assume that nearly all of them would recover about as well were they permitted to get out of bed on the second day. This may be demonstrated by further experience.

THE COURSE AND TREATMENT OF MYXEDEMA, WITH SPONTANEOUS DISLOCATION OF THE HIP-JOINT— REPORT OF A CASE.

BY A. H. SCHENK, M.D., KENNEY, TEXAS.

The following report of a case occurring in general practice has a surgical as well as a medical interest; only the clinical history as a whole makes it unique and deserverving of mention:

Mrs. G. F——, aged thirty-seven years, German by birth, came to me for treatment in the spring of 1894. She gave an excellent family record. At that time she was a sufferer from intermittent fever. This was of a stubborn recurrent type, which yielded only to a prolonged continuous course of quinine, arsenic, and strychnine. At this time I remember that a peculiar appearance of her skin and face made an impression on me. She was a stranger, and I attached little or no importance to the dry, glistening appearance of her skin. She was still taking an antimalarial tonic several weeks later, when her husband remarked to me that she still suffered from disinclination to work, and that her face and extremities seemed swollen. I advised the discontinuance of the tonic, as it contained arsenic. She followed my advice, but the swelling did not disappear. It was some weeks later when I was again consulted regarding her health. The swelling still existed, and she complained of a general feeling of languor; appetite and other functions were apparently normal.

Several careful examinations of the urine led me to exclude kidney disease. The edema persisted and was gradually increasing. Myxedema was suspected, but believing it might be a skin disease, which I was unable to clearly define, I prescribed in a vague way the mercauro and arsenauro preparations. After a prolonged trial these were abandoned. Iodide of potassium was now given, but it was not borne even in very small doses. She became pregnant, and with no assignable cause aborted in October, 1895, in the fifth month. Her recovery from this seemed uneventful, when three weeks after the abortion a very painful and inveterate attack of sciatica developed. This taxed my resources to the utmost. It ran a course of its own, lasting nearly three months. Treatment was only palliative, as no measures seemed to shorten the attack. When the sciatica had spent

its force, and paroxysms of pain were on the decline and becoming milder each day, the primary disease remained unchanged.

I saw the patient seldom, and had discontinued my visits over two months, when I was once more called to see her. In addition to the previously described general subcutaneous thickening, she now had a dislocation of the femur upwards and backwards. The dislocation had occurred spontaneously. The toes of the dislocated limb, as usual, pointed over the instep and across the tibia of the other foot and limb. There was no pain now, except that any attempt at movement gave excruciating pain in the diseased joint. Her general condition was now about as follows: The face had lost its natural appearance, with puffy eyelids, large, pouting lips, alæ nasi much thickened, giving the nose a cut-off, stumpy, and pug appearance. The cheeks were much enlarged, nearly pendulous, and each had on it a bright-red network of capillaries. The lobules of her ears were enlarged, and not symmetrical, one being three times the size of the other. Her eyebrows were disappearing, and the hair on her head was dry, lifeless, and brittle. As a whole her appearance was coarse, stupid, and expressionless. The hands were enlarged, with fingers not tapering, but spade-like. The feet were very much thickened. The entire skin was of a muddy yellow hue, shining, hard, and dry. The nails of her toes showed a lack of nutrition, appearing lifeless and brittle. On the feet, ankles, and heels were localized areas of gangrene, forming first blebs; these would slough and finally form ulcers, suggestive of Raynaud's disease. The subcutaneous connective tissue over her whole body was thickened. The skin on her face, back of the hands, arms, and feet could not be pinched and lifted with the fingers, but was solid and stiff, on account of the increased cellular tissue. Her mind was remarkably clear. She was downhearted and despondent to a degree over her helpless, deformed condition, but I cannot say that she was very dull in intellect, considering the advanced stage of the disease otherwise. At times she was hopeful and cheerful.

With the assistance of Drs. Biggs, McGregor, and Thompson I attempted replacement of the dislocated limb. Reposition was effected by the Cooper method with straps and pulleys; however, we could not retain the head of the femur in its socket. We then decided to excise the head of the femur. The hip was laid open after the method of Sayers. I then removed the whole head of the femur with about one-third of the neck, at the same time endeavoring to secure an oblique articular surface to fit into the cavity. The cavity was now deepened with a Volkmann spoon, the new surface of the neck of the femur placed in it, and the limb dressed, and a long Hamilton extension splint applied. We found no capsular ligament. The liga-

mentum teres had also disappeared, and the rim of the acetabulum had shrunk, leaving the cavity very shallow. The head of the femur had diminished in size and was easy to remove, being of rather soft, brittle consistence. Her condition was hopeless. The lymphatics of her body would enlarge periodically, her eyebrows fell out altogether, and the localized spots of gangrene increased in number and severity. I now placed her under the thyroid gland treatment. Parke, Davis & Co.'s thyroid gland tablets were given in 2½-grain doses twice a day at first, and gradually the dose was increased until she was taking 5-grain doses four times a day. Untoward effects were looked for, but she never had a symptom of tachycardia or sleeplessness. Her improvement has been exceedingly tedious and slow; it has, however, been uninterrupted, and the change for the better is so pronounced that we lay claim to a successful treatment. She has an artificial joint as a result of the operation, and has a painless, useful limb on which she is able to walk without crutches.

The following points are worthy of remark:

1. The comparative clearness of intellect.
2. The temperature was found subnormal only at times.
3. The marked tolerance of the thyroid treatment.
4. The localized blebs and gangrene on her extremities.
5. The hip-joint complication. What is its relation to the general disease, and what were the pathological changes of the joint?

HAS MEDICAL SCIENCE MADE PRACTICAL ADVANCES?*

BY A. L. BENEDICT, M.D., BUFFALO.

That medical science has progressed rapidly in recent years no one will deny, but to all the laudatory remarks of commencement and other anniversaries there is a not inaudible undertone which asks, "After all, is the healing art more effective to-day to produce cures and actual relief from disease and injury than it was a generation or a century ago? Or, on the other hand, is the modern scientific physician, like the devotee of whist, playing to exercise his skill rather than for points?"

To a certain extent it is true that medicine as a science or group of sciences has advanced more rapidly than medicine as an art, and there is now, as never before, an opportunity for men not adapted to work in any of the practical branches of medicine to attach themselves to the medical profession, and to win fame and the gratitude of the physician by the advancement of such sciences as bacteriology and

* Read before the Buffalo Society for Natural Sciences.

chemistry. But the growing appreciation of the worth of such services by no means indicates a tendency to neglect the sick and the injured. Theoretic knowledge almost always precedes practical application. The magneto-electric toy of the laboratory was in existence a full generation before perfection of detail and increase of power transformed it into the dynamo. The principle of the induction coil and the making and breaking of circuits were well known long before the telegraph. Many of the phenomena of fluorescence, the possibility of photographing with invisible vibrations, and other suggestions of the *x*-ray, may be found in text-books of physics a quarter of a century old. The theorist must always be the pioneer of practical development. The chief glory of modern medicine is that she has this vanguard of scientists; her least shame that practitioners are a few steps behind. To urge that this inevitable condition be reversed in the case of medical art is only another way of saying that the practitioner should be an empiric, knowing nothing except as he experiments on his patients.

A very simple way has been proposed to discover whether or not the medical profession is doing its work with increasing skill—to consult successive mortality tables. But, like many other simple and plausible substitutes for close investigation, so many fallacies exist that the comparison of death-rates is practically worthless to decide this question. Strange as it may seem, the prime function of the medical profession is not to banish death. Death is inevitable, and from the standpoint of society as a whole eminently desirable. It is futile to try to explain why the human machinery, however skilfully repaired, cannot be made to run indefinitely. To-day, except by a quibble of words, we are no nearer the truth than the ancient observer who wrote with simple dignity: "The days of our age are threescore years and ten; and though men be so strong that they come to fourscore years, yet is their strength then but labor and sorrow."

Imagine that, through attention to sanitary details and the advancement of medical skill, no one died except from old age. A thousand persons of equal age, then, would all die at once at the end of eighty years, while an average thousand of all ages would present an annual mortality of 1000 divided by 80, or between 12 and 13. If the limit of life be taken as seventy years, the death-rate would be between 14 and 15. The present mortality runs from 25 per 1000, which is considered fair for large European cities, down to about 20 per 1000 for the northern parts of the United States, with a minimum of less than 14 per 1000 for the city of Buffalo. The worst kind of logic is that which proves too much, and the actual attainment for a large city, of a mortality less than would be due to deaths occur-

ring from old age alone, is the best possible proof of the unreliability of statistics for the purpose of giving a true impression. With all allowances for really excellent sanitary and medical services, such a death-rate is only possible when the population is swelled by the arrival of healthy adults. It is one of the paradoxes of vital statistics that a low death-rate always means a relatively low birth-rate.

In other ways a study of mortality tables is unfair to medical progress. For example, a recent railroad wreck has caused the sudden death of twenty-one adults, and a still more recent shipwreck of nineteen. That is two catastrophies, utterly beyond the control of either medical or sanitary science, which have in a month destroyed more lives than should have occurred in two thousand average persons, and more than should have occurred in five thousand persons of the average age represented by the victims, for in neither case were the susceptible periods of infancy and senility included. In the State of New York, free from wars, vigilantly policed, highly civilized, the death-rate for 1896 was about nineteen—less than five more than the attainable limit, if we consider seventy as the average duration of life. Considerably less than one of these nineteen deaths per thousand was due to old age, while rather more than one was assigned to violence. Of the nineteen deaths, three or four were due to zymotic—that is, theoretically preventable — diseases, aside from consumption, which killed two in each nineteen.

Even such statistics as these fail to show the absolute inevitability of a death-rate higher than the theoretical limit. For example, by social conditions that have existed from the beginning of human history, a man is compelled to dig in the dirt through a long day, though shorter now than ever before. His feet are wet and cold, because he cannot afford warm and water-tight boots; his meals are cold and innutritious, because he cannot buy warm and nourishing food; he walks several miles to and from his work, because he can scarcely afford car fare. The one comfort and luxury that he can afford is the saloon, where his nervous strength is undermined and his vital organs are degenerated. Some chilly day that man is seized with rheumatism, his kidneys are overwhelmed with the poison of the disease because they are no longer of normal consistency, his heart becomes disabled, and after more or less complete recovery and a variable renewal of his lease of life, the man dies. Then the question is asked, Why does not the medical profession know enough to cure rheumatism? Or another man, never knowing what it is to lack a meal or clothing or a fire, is still so poor, according to the standards of society, that he is never free from worry and never able to rest. Such a man —and modern civilization produces his like by the thousand—wears

out at an age when he ought to be scarcely past his meridian. You will look in vain for a column in mortality tables to include either of these cases; instead you will find them charged against the reputation of the medical profession in whatever disease they happen to succumb to just before the final giving out of the vital machinery. When we were children we were taught to say that one dies *of* bronchitis, not *with* it; but if the truth were known, we should rightly say that thousands have died *with* rheumatism, *with* pneumonia, *with* heart disease, *with* various ailments which they would have failed to contract or which could have been cured if their resistance had not been destroyed by conditions which neither sanitary nor therapeutic skill can remedy. These conditions will become more and more bitter as so-called preventable deaths are diminished and the competition of life becomes more fierce. In other words, unless some compromise can be found between the frank brutality of existing social conditions and the visionary schemes of social reformers, men must wear out—that is to say, die of old age—younger and younger, as medical achievements allow them the opportunity to attain a greater and greater longevity.

The only practical method of studying the advance of medical skill is to consider one disease after another. First of all, we note that many ancient enemies of the race have been almost annihilated—leprosy, smallpox, typhus fever, Asiatic cholera, relapsing fever, are almost unknown in civilized countries. If medicine had done nothing more in a little over a century than to reduce the death-rate due to smallpox from an average of nearly three per year per thousand, and in some instances from a death-rate in one year of a third or more of the population of a large city or district, to the present insignificant mortality, she might well claim to have benefited the human race more than any other single art or science. That five great plagues—and others might be mentioned—have been rendered dead issues for every part of the world that has heard and heeded her pleadings is something to make every medical man proud of his practical, and for the most part unscientific, predecessors. But, it may be said, this exemption from loathsome disease and painful death is due to sanitary rather than to medical advance. I might reply that sanitary science is simply that part of medicine which non-medical men have been forced to acknowledge as worthy the support of the State. I might mention another plague, brought by returning crusaders to Europe, and which was for centuries one of the most horrible as well as fatal of diseases. This disease, syphilis, is almost as common to-day as then, but modern medicine—using the word medicine now in the most limited and concrete sense—has so modified its course that it is

rarely fatal, and to the uninitiated seldom noticeable, except when the patient neglects the almost absolute cure which is within his reach. Malaria is another disease against which we have learned both the hygienic safeguard, drainage, and the therapeutic relief, quinine with accessory drugs. In many swampy parts of the country the disease is still rife, but in the settled northern districts it is seldom encountered, except as it is carried in the blood of those who have contracted it in distant places.

Scarlet fever, measles, diphtheria, and similar actively contagious diseases still remain, but they are by no means so common nor so fatal as they were even a few years ago. Up to twenty-five or twenty years ago it was by no means uncommon to see two or three, perhaps four or five, houses in a row placarded to warn against one of these diseases. To-day we think that there is an epidemic if two houses in a block bear the same sign. In the case of measles and scarlet fever we have made no brilliant discovery which has radically changed our methods of prevention and treatment; we are simply a little more careful, a little better informed, a little more successful in managing such cases. A German physician has within three years demonstrated the progress of an epidemic of measles, has pointed out a marked difference in susceptibility in different children, and has proved that careful inspection and prompt closure of schools at the beginning of an epidemic may be relied on to decrease the prevalence of this disease to at most a quarter of the present rate. In regard to diphtheria, even setting aside the protective serum, the use of antiseptics locally, the introduction of the method of intubation of the larynx, and the better conduct of the case with reference to maintaining vital strength, have greatly diminished the mortality. Recent statistics, which only the most skeptical can question, show that the use of the serum, under proper circumstances, has divided the death-rate by two, and has also in all probability warded off many attacks which seemed imminent.

Typhoid fever has suddenly become a rare disease in many cities and districts, while remaining as prevalent as ever in others. Five or six years ago your family physician expected to treat ten or a dozen cases during the fall and winter; now there are several American cities, including Buffalo, in which the annual number of cases of typhoid is only a third the number of physicians. In such cities it is found that about half of the cases of typhoid can be traced to infection by working in sewers, or to drinking water from wells, or to some other exposure to which the average resident of the city is not liable. Nothing illustrates better than this disease how much the public owes to the labors of bacteriologists. Not that they were the first to dis-

cover the gross means of conveyance of the disease nor the practical methods of avoiding infection. For at least twenty years, and in isolated instances much longer, medical men with no knowledge of bacteriology have known that typhoid fever was usually due to the use of water into which the discharges of other patients had drained; that milk and vegetables might be similarly contaminated; that freezing the water into ice did not destroy its power of transmitting the disease. Why, then, were not the requisite means adopted of carrying out the simple methods dictated by common sense? Because the mass of the people and their representatives would not believe what physicians told them, or, at least, would not make their belief of practical value by adding to it the necessary works. When bacteriologists became able to point out the exact microscopic plant which causes typhoid fever, when they cultivated it and proved that it would live for a long time in water and that it was not killed by freezing, when, in many instances, they actually succeeded in recovering it from suspected water and milk supplies, the proof of the assertions of clinical observers was so positive that the people reluctantly consented not to use water, milk, and ice contaminated by sewage. But the struggle was a hard one, and in many places it required all the science of the bacteriologists, all the experience of the practicing physicians, all the influence of enlightened non-medical citizens, to enable the board of health to contend against other civil authorities who fairly insisted that the people should not be deprived of the privilege of drinking polluted water. This, too, you will say, is sanitation, not medicine. But it has also been brought about by two methods of treatment, both modern and each founded on an independent conception of the best point at which to attack the disease, so that its mortality has been reduced nearly half in the last few years.

In surgery, obstetrics, and gynecology the use of measures to protect against bacteria has produced results which are marvelous, but which I shall pass over in a few words, as so much has already been written on these subjects. The old mortality in well-kept maternity hospitals was from three to ten per cent; at present it is scarcely as many in a thousand. Tumors and inflammatory conditions of the abdomen and pelvis, prolific sources of invalidism and death in the last generation, are now removed by operations having an average mortality of only one or two per cent. Such operations would have been almost impossible without anesthesia to allow deliberate surgical procedure, and were fatal in the great majority of cases till an understanding was reached, barely fifteen years ago, of the influence of bacteria and the means to nullify it. Progress in this direction has done more than to save the life and health of thousands of women, for

it has restored to the family the mother whose vigilance and devotion are of the greatest value in watching over the health of other members, and particularly the little children.

In general surgery the formation of pus, the danger of septicemia, pyemia, hospital gangrene, etc., are almost relegated to the past, wounds heal more kindly and more quickly, limbs are saved as a matter of course which twenty years ago must have been amputated, deformities are relieved, and mechanical results achieved which would have been impossible without the rigid exclusion of germs. The brain, the spinal canal, the abdominal viscera, even the heart, are now subject to operative interference, with reasonable expectation of cure, in cases which formerly would have been kept comfortable with morphine till death occurred. We hear a great deal at present about the vermiform appendix, which was formerly scarcely mentioned except by teachers of anatomy. Has a new disease been developed? By no means, but surgeons have taught us that peritonitis, which was formerly treated with opium till the patient either died or made a slow recovery, is in the vast majority of instances due to inflammation of this little member, and the patient is cured by operation, unless the hands of the operator are criminally delayed, or unless some especially unfavorable circumstance exists. Cancers may be eradicated if operation be performed in time, and the medical practitioners of the country are learning to detect malignant conditions earlier and to insist upon surgical interference before hope is lost. In hundreds of other ways the sharp kindness of surgery is benefiting humanity. That this eulogy may not appear as the boast of a prejudiced enthusiast let me remind you that it comes from a distinctly *medical* practitioner.

As impartially as may be, let me say a word in behalf of specialism. Its advantage is quite independent of the claim, sometimes made in a spirit of quackery, that the specialist is a physician of an essentially higher order than the general physician or surgeon. Given a man of average ability who can somewhat command his time, who can economize effort by putting it forth in one direction, who can economize in material things by restricting his appliances and apparatus to one class of diseases, and it is self-evident that better results can be obtained than by scattering the same amount of potential medical energy in all directions. The progress of the medical specialties is not marked by such radical and novel discoveries as antisepsis, anesthesia, serum-therapy, etc.; it is rather due to the cumulative force of earnest study to improve details. In many specialties attention has been given almost as much to securing comfort and to removing mortifying blemishes as to the prevention of life-threatening disease. Nowhere has greater improvement been manifested than in dentistry,

which now ranks as a special branch of medicine, and as the only one in which formal special instruction is given. There are few conditions which arouse our sympathy so readily as blindness, and there is now in progress a determined attempt on the part of oculists, cooperating with other members of the medical profession, to lessen the prevalence of this sad deprivation. There is, also, scarcely a greater luxury to one who has existed in a state of crippled vision on account of near- or far-sightedness or astigmatism than to be able to see clearly, and this boon we owe to one of the medical specialties. I will not attempt to discuss the more serious ocular diseases, requiring local applications and surgery, but I wish to warn you—and I can do so in a disinterested spirit—that the eye is something more than an optical apparatus, and that it is dangerous to run the risk of an error of commission or omission on the part of non-medical men who essay to relieve refractive errors by fitting glasses.

To the throat and nose practitioners we owe the relief of many cases of mouth-breathing, a condition which threatens the integrity of the lungs and lower air-passages by allowing the air to enter uncleaned, unwarmed, unmoistened by the nostrils. A cold is considered a trivial affair, but it is by no means trivial if allowed to recur repeatedly; and we may well be grateful to the specialty that eradicates spots of special susceptibility and imparts resistance to the delicate organs in which the most frequent and annoying trouble of civilization is located. Deformities of the nose are also capable of relief, and much mental suffering is thereby averted. Thanks to the discovery of cocaine, the surgical operations of the nose and throat are now performed without pain and without the inconvenience and slight danger of general anesthesia.

Skin diseases are more quickly and more surely cured than formerly, and moles and superfluous hair are removable by electricity. The stomach has become almost an external organ, so closely can we watch its processes in health and in disease.

To return to general diseases. Tuberculosis, which in the form of consumption kills about a ninth of civilized human beings, and in all forms is responsible for about a fifth of all deaths not due to old age and violence, is earlier recognized than formerly, on account of progress in clinical bacteriology and in physical diagnosis, the latter being mainly acoustics applied to the viscera. Being earlier and more clearly recognized, it is more amenable to treatment at curable stages, and many medical men already claim that the death-rate from tuberculosis has fallen off. Personally I believe that the word consumption, as used two generations ago, when diagnosis depended almost entirely on symptoms, included so many non-tubercular cases and excluded so

many atypical but genuine cases that an accurate comparison of statistics is impossible. But the mere recognition of the contagiousness of this disease has saved many lives, and cures are certainly more common than formerly.

The mention of physical diagnosis suggests another point of superiority of modern medicine. Three generations ago the physician relied on the statements of the patient for almost all of his information, except that obtained from the pulse and from the tongue—the latter being often extremely misleading. Within ten years it has been the exception that the patient expected anything more from the physician in ordinary cases than a reasonably careful consideration of symptoms. Under such a custom many diseases like diabetes, locomotor ataxia, valvular affections of the heart, Bright's disease, organic liver troubles, dilatation of the stomach, abnormal conditions of the blood, obscure diseases of all kinds, were invariably missed, and it is evident that it is luck, not skill, that enables a man to cure a disease of whose very existence he is ignorant. To-day both physician and patient realize that the sensations of the latter are of comparatively little value in identifying disease, and more careful methods are insisted upon.

Rheumatism is a very prevalent disease, and while rarely immediately fatal, it is the most common cause of heart disease, and is responsible for many crippled limbs that interfere with needed exercise and increase the danger from accidents. One of the most illustrious physicians of a century ago, when asked what was good for rheumatism, replied, "Six weeks in bed." To-day the average case can be cured, without permanent mischief to the heart or joints, in two weeks or less.

In a paper of this length it is not possible to show all that medical art has accomplished in detail. In a few instances what are practically specifics have been discovered, but such drugs are rare and never fulfil perfectly the requirements implied in the term. In many surgical conditions, and a few medical, almost ideal results have been achieved. Through the cooperation of the non-medical public many diseases have been almost annihilated, and we may reasonably hope that most germ diseases, including consumption, may be prevented, provided sufficient power is granted to boards of health and the people are willing to follow the suggestions of medical science. Two limitations of medical skill can never be overcome—nothing can be accomplished unless the patient will submit to treatment and follow advice, and an abused and worn-out machine can never be made as good as new.

One of the grandest advances that medicine has ever made in this

country is now going on. In some States, like our own, the standards have been planted within a year to mark a breastwork of opposition conquered; in others the line has not yet been able to carry the objective point. For years the better part of the medical profession has been fighting popular sentiment or popular indifference, as expressed by State legislatures and governors, to secure a long-coveted concession. What is this privilege that it has taken so long to gain? The right of the sick man to be treated by an ignorant, incompetent physician. But let us not waste time in lamenting the tedious struggle of the medical profession to keep uneducated men out of its ranks. We now have a fair standard—an academic training—and we may hope that with such a minimum the aggregate study and striving of a hundred thousand physicians will accomplish more in the near future than has been achieved in the century that is about to close.

THE *Revue Scientifique* of January 21 publishes a long list of prizes proposed by the Paris Academy of Sciences for the years 1899, 1900, 1901, and 1903. The prizes in medicine, surgery, and allied subjects are as follows: Prix Montyon, of 7500 fr. (medicine and surgery); Prix Montyon, of 750 fr. (experimental psychology); Prix Montyon, of 3000 fr. (hygienic improvements in dangerous trades); Prix Barbier, of 2000 fr. (discovery in medical, surgical, or pharmaceutical science, or in medical botany); Prix Breant, of 100,000 fr. (cure or prevention of cholera); Prix Godard, of 1000 fr. (anatomy, physiology, and pathology of the genito-urinary organs); Prix Serres, of 7500 fr. (application of embryology to physiology and medicine); Prix Chaussier, of 10,000 fr. (application of embryology to physiology and medicine); Prix Bellion, of 1400 fr. (works or discoveries conducive to health or to the improvement of the human race); Prix Mege, of 10,000 fr. (completion of an essay on the progress of medicine); Prix Lallemand, of 1800 fr. (works relative to the nervous system); Prix du Baron Larrey, of 1000 fr. (naval or military medicine, surgery, or hygiene); Prix Pourat, of 1400 fr. (specific characters of the contraction of different muscles); Prix Philippeaux, of 890 fr. (experimental physiology); Prix La Caze, of 10,000 fr. (works or memoirs contributing to the progress of physiology).

AS a result of comparison of a large mass of data Jastrow concludes that "men of thought live 69.5 years, or 3.5 years longer than ordinary men, while the lives of men of feeling (*e.g.*, artists and musicians) are three years, those of men of action five years, shorter than those of average men."

CORRESPONDENCE.

THE PERINEAL NEEDLE.

To the Editor of THE MEDICAL AGE:

DEAR SIR—In your issue of December 27 appears a letter by Dr. Edward W. Jenks, in which he draws attention to the fact that he preceded me by eight years in the publication of a description of a perineal or cervical needle, which is a Hagedorn needle set on at right angles to a Peaslee shank. I began teaching obstetrics in 1883. In 1884 or 1885 I first had one of these needles made by Messrs. Tiemann & Company; they have been in use by myself and my students ever since. During the '90s Kaysan, of Brooklyn, has been making the improved needle with an open handle, and the curve, instead of the right angle, at the bend of the needle. This curve at the bend facilitates suturing of injuries high up on the vaginal wall, in such fashion that the tip of the needle can be brought out of the vulva, to permit of the suture being slipped beneath the carrying thread.

I gladly cede to Dr. Jenks that the needle ought to bear his name, because it was he who first published it, though it is possible that I had it first in use.

ROBERT L. DICKINSON, M.D.

THE Turkish Government, in view of the approaching fêtes, has sent police officers to all the druggists' shops to seal up the packages of chlorate of potash, presumably with the object of checking the manufacture of explosives. The Turkish anarchist must, however, be lacking in resource if the deprivation of chlorate of potash prevented his carrying out whatever fell designs he may have conceived. In the matter of easily prepared explosives there is a positive *embarras de richesse*, and the puerility of this precaution is thereby rendered conspicuous.

A MEDICAL congress of hygiene is to be held at Como, in Italy, some time this year, in connection with which there will be a solemn commemoration of Volta. Professor Baccelli, minister of public instruction, has been named honorary president of the organizing committee, which also includes the names of Professor Bizzozero, Senator of Italy, and Professor Golgi. An exhibition of hygiene will be held in connection with the congress.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

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EDITORIAL ARTICLES.

THE BACILLUS OF INFLUENZA.

Some important contributions seem to have been made to bacteriological science by the labors of Dr. Reilly and Dr. Wyncoop, who are connected with the Chicago Department of Health. These investigators have been giving considerable attention to the bacillus of influenza, and a preliminary report of their labors by Dr. Wyncoop appears in the *Bulletin of the Chicago Bureau of Vital Statistics* for January, 1899. The points to which these investigators have given special attention are of great interest to physicians and sanitarians. Is there an influenza vera due to a special germ, the bacillus of Pfeiffer, and is there also a pseudoinfluenza, the so-called grippe of the laity, in which this specific germ is absent? The one disease dangerous by its toxic effect upon vital centers, and the other one comparatively innocuous, much in the same way as a streptococcic diphtheria differs in virulence from the specific disorder.

Dr. Wyncoop's labors during the last two or three months have convinced him that after one has become familiar with the Pfeiffer bacillus it is easily identified in the sputum of the patient, and it is not necessary to go through the process of cultivating it in the laboratory. The outcome of his researches would seem to prove that influenza is a widely prevalent disease, and that there is some show of reason for the action of the laity in pronouncing various and apparently dissimilar diseases to be la grippe. It was shown that many cases which appeared at the outset to be diphtheria were infections of the Pfeiffer bacillus, and the subsequent developments confirmed the microscopic diagnosis of influenza. Many cases that showed only the clinical symptoms of tonsillitis or laryngitis were also shown to be accompanied by the presence of the influenza bacillus in the expectorations. Along the same line of discovery Dr. Wyncoop in his preliminary report says it

has occasionally been observed by physicians that when influenza was present in the household, the eyes of the members of the family suddenly became acutely inflamed, accompanied by severe pain, swelling, and redness of the conjunctiva, with a profuse discharge of pus of medium consistency and cheesy appearance. In that the disorder differed materially from acute conjunctivitis, it was suspected that the bacillus of influenza might have something to do with the diseased condition. Cultures were made from discharges, and the suspicion was verified by finding in great numbers the influenza organism. Experiments are now being made upon the eyes of guinea-pigs with pure cultures of the bacillus, and it is hoped soon to be able to report further concerning this additional manifestation of the ubiquity of this maleficent microbe.

It stands to reason that in a disease with such various manifestations as those of influenza, and one which complicates other maladies to the extent of inordinately increasing the death-rate of an invaded community, one of the things most to be desired is some method of prompt and certain diagnosis. It would appear from the statement issued by the Chicago Board of Health that the bacillus can be easily recognized in the sputum by the direct method. Cultures, however, can be made in from ten to fifteen hours of incubation, and when the bacillus is thus developed the diagnosis can be made with but very little difficulty. The influenza bacillus is certainly one of the most insidious and deadly enemies of the human race, and no amount of effort should be spared to make our knowledge of its occurrence and behavior certain and complete.

EDITORIAL NOTES.

Prolonged Sleep in the Treatment of Chorea.

In a paper read before the New York County Medical Association, Dr. Louis Lichtschein advocated the treatment of chorea by prolonged sleep. The fact that choreal movements generally ceased during sleep led him to suppose that the disease could be controlled by artificially induced sleep. To produce the desired somnolent condition he gave large doses of chloral. The sleep should be superficial enough to allow the patient to respond when spoken to loudly, and still sufficiently deep to keep him quiet. He had treated three cases by this method, and in one of them the patient had been kept asleep for three weeks, having received 160 grammes of chloral. During this period the chorea had been controlled, and she had

gained over twenty pounds in weight. Some objection might be urged to this line of treatment from a consideration of the effect of chloral upon the heart, but there would probably be little danger from this cause, especially in those cases of chronic chorea where considerable exhaustion accompanied the choreal movements. The suggestion is a valuable one and will doubtless be extensively acted upon.

Medical Legislation for Michigan.

Among the measures providing for the constitution of a board of medical registration must be mentioned House Bill No. 515 introduced by Mr. Chandler. The bill provides for the appointment of ten members of the board from various so-called schools of medicine. A somewhat wise feature in this bill is that the different medical societies of the State shall furnish to the Governor a list of members, from whom he shall make his choice. This would be a means of keeping the board in close sympathy with the interests of the medical profession. The act contemplated seems to be in every way a wise one, and it is to be hoped that the profession will generally accord it a support.

Poisoning by Glass.

In a recent case before the Michigan courts an interesting situation was evolved through the testimony that an accused wife had attempted to administer pounded glass to her husband. Some individual has recently been reviewing the literature connected with cases of glass poisoning, and has about come to the conclusion that a large quantity of pounded glass can be taken with comparative safety, or at least that it is not the dangerous proceeding it has been believed to be. From the small number of cases on record it is surprising to find the immunity the swallowers of pounded glass enjoy.

The Hell of War.

The penalties of war are carefully considered in an essay by Mr. Edward Atkinson. Increased taxation will be one of the least of the penalties of expansion. The greatest and most unavoidable danger to which our armies will be exposed will not be malaria, but venereal diseases in their most malignant forms. The experience of England in India is likely to be an inevitable outcome of a policy of expansion.

ITEMS AND NOTES.

THE second Portuguese congress of medicine will be held at Oporto in 1900.

IT is reported that the Czar is suffering from a malady of such a character as to forbid all intellectual labor.

IN a bicycle race at Sydney, N. S. W., in January last, the winner died of syncope the instant he crossed the tape.

OUT of the 40,000 practitioners now holding diplomas in Japan, 27,000 are disciples of the old Chinese school.

IT is proposed to establish a cancer hospital in Buffalo which will be conducted on the plan of the German Cancer Hospital of Berlin.

A STATUE to the memory of Von Helmholtz is to be unveiled during the spring in the court of the University of Berlin.

THE Woman's Medical College of St. Petersburg accepts no student without written permission from parents or husband.

FRAULEIN DR. KATHARINA VAN TUSSHENBROEK has been appointed professor of gynecology in the University of Utrecht.

THE number of medical practitioners in France is rapidly on the increase, already amounting to 17,735 in 1899, as against 15,984 in 1898.

RECENTLY published statistics show that the total number of medical students in the Italian universities during the academic year 1897–1898 was 6878.

MANY cases of poisoning have occurred in Paris from bread which had been baked in ovens heated by old bits of painted wood gathered from destroyed houses.

RECENTLY there was passed in Norway a law prohibiting the sale of tobacco to any boy under sixteen years of age without a signed order from an adult relative or employer.

PADRO LUCERO, whose age, as shown by the records of the missions of Los Angeles and Soleda, was 125 years, died at the county hospital, San Francisco, October 25, 1898.

THE need of a scientific test of death has suggested the use of Roentgen rays, as the slightest movement of the heart blurs the skia-

graph, and in Paris they have already been successfully used for this purpose.

Statistics appear to show that chloroform is less dangerous in warm than in cold countries. It is, therefore, always advisable, whenever for any reason chloroform is to be preferred to other anesthetics, to see that the operating-room has a high temperature.

The Council of the Jenner Institute of London has been offered $1,250,000 for the purpose of endowing research in bacteriology and biology as bearing upon the causes, nature, and prevention of disease, on condition that its management and control should be vested in seven trustees.

The buildings of the new Academy of Medicine of Paris have just been begun, and the buildings of the Mont-de-Piété, which hitherto have occupied the site, have been pulled down. The plans as put forward by the architect are considered to show that the new Academy will be one of the most beautiful buildings in Paris, but it will hardly be ready by 1900.

At the recent meeting of the American Physiological Society, Dr. J. K. Mitchell, of Philadelphia, reported observations on the effect of massage on the blood. He found that in health massage increases the number of red corpuscles and to some extent their hemoglobin value; that in anemia there is a very constant and large increase in the number of red corpuscles after massage.

An alleged discovery of the bacillus of vaccinia, by Mr. Stanley Kent, of St. Thomas Hospital, is recorded in a London newspaper. Mr. Kent claims that it will revolutionize vaccination, as pure cultures of the vaccinia germ can henceforth be used for inoculation in the same way as pure cultures of diphtheria and tetanus are now available for preparing antitoxic serum.

Baron Henri de Rothschild, a member of the Paris branch of the famous financial family, has passed with distinction his final examination for the degree of doctor of medicine. M. de Rothschild's graduation thesis is founded upon observations made in a private dispensary, which he established for the treatment of infants. He was awarded a silver medal by the Academy of Medicine.

The United States Marine Hospital service last month issued a précis upon the diagnosis and treatment of smallpox, which was an interesting and timely contribution to the literature upon this subject.

The State health officer of Alabama, Dr. W. H. Sanders, of Montgomery, has supplemented the Marine Hospital report with a brochure which sets forth in a striking manner the value of vaccination.

MANY of the New York theater playbills contain the following notice: "Physicians who have patients to whom they may be called suddenly, and who have heretofore remained away from the theater for fear of being out of call in such cases, can now leave their seat numbers in the box office and be called as quickly as in their office. Ushers will deliver messages to them promptly upon receipt of same over the telephone."

THE Surgeon-General has decided that it would neither be advisable nor safe to remove to this country the remains of soldiers who died in Cuba during the spring and summer months before the following winter, and this opinion is concurred in by the Secretary of War. A special officer has been detailed in each department of Cuba to superintend the disinterment of bodies and see to their proper preparation and shipment.

A VERY remarkable decrease in the number of cases of diphtheria is reported in the town of Trenton, N. J., in the annual report of the State Board of Health. It says the number of deaths has continued to diminish, and only 950 were reported during the year. This is 142 less than in 1897. It is agreed by the medical profession of the locality that the reduction of the mortality has been due to the use of diphtheria antitoxin.

MEDICINE, in France at least, says the *Pacific Medical Journal*, appears to have charms for the old, as well as the young, energetic mind. It is said that a Frenchman lately became a qualified practitioner at the age of fifty years; that another scientifically inclined man at seventy-two began preparing for the degree of B.S. with the view of thereafter taking up medicine; while a French maritime surgeon was still faithfully performing his duties on board ship at the ripe age of eighty-one years.

THE first lady to win the distinction of a diploma from the medical faculty of Paris is Mme. Gaboriau, whose husband, by the way, is also a doctor, practicing in the Ville Lumiere. Prior to receiving this diploma Mme. Gaboriau had already distinguished herself by gaining the diploma of pharmacy. To secure a doctor's diploma requires five years of study, and the diploma of pharmacy necessitates six years. So the studies of husband and wife together covered a period of twenty-two years.

London can no longer lay claim to being the healthiest of European cities. Ten years ago the death-rate was 19.9, and in 1898 it was 17.2. During this period the death-rate of Rome, which ten years ago stood at 22.6, has been reduced to 16.9, and that of Berlin has fallen from 20.4 to 17.7. Amsterdam has the lowest record of any, having in ten years fallen from 20.2 to 15.8. Ten years ago Stockholm had the same death-rate as London, but instead of a reduction of 1 per 1000, there is an improvement to the extent of 3 per 1000, and to-day the figures stand at 16.7. Brussels has fallen from 20.2 to 16.6, and Copenhagen from 20.5 to 17.5, in the same period.

Surgeon-General Sternberg, in a letter to Senator McMillan, made the following vigorous reply to criticisms on his vivisection experiments: "The fact is recognized by well-informed physicians throughout the world that the great progress made by scientific medicine during the last thirty years has been to a great extent due to experiments on the lower animals, and that our exact knowledge with reference to the cause and prevention of infectious diseases in man and domestic animals is based largely on inoculation experiments—made for the most part on small animals, such as mice, guinea-pigs, and rabbits. If I had hunted rabbits with dogs there might have been some foundation for the charge of cruelty. But no one has proposed that Congress shall legislate to prevent the wounding and killing of animals for sport, while my experiments, made in the interest of science and humanity, are characterized by Dr. Leffingwell and his associates in this crusade against scientific investigation as cruel."

The Pathological Department of Rush Medical College solicits contributions of teratological specimens for the museum. The teratological series of the museum is now the best in the Northwest, and it is desired to still further improve it. Specimens of monstrosities and gross malformations, both human and animal, will be carefully dissected and marked with the doctor's name, a copy of the photograph and of the dissection notes will be sent him, and due credit will be given him in any publications which utilize the specimen. It is desired that the fresh specimens be sent, if possible, or that they may be preserved in a five-per-cent solution of formalin, or in a fifty-per-cent solution of alcohol. Transportation charges will be paid by the College. The recording of any clinical facts in connection with the birth of a monster will add to the value of the contribution. Communications may be addressed to Dr. L. Hektoen, Rush Medical College, Chicago, or to Dr. H. F. Lewis, 4426 Lake Avenue, Chicago.

THE Paris correspondent of *The Lancet* writes that the Paris Tribunal has just had to deal with the case of a druggist who falsified his pills and potions with an audacity which is happily uncommon. He had sold his business, which apparently had realized good profits. But his successor very soon saw that by selling drugs and medicines at the same prices as his predecessor he would soon be on the brink of ruin. He then discovered that the vendor of the business, while copying all prescriptions accurately into his register, in accordance with the law, gave his customers very different preparations, which, according to him, would produce the same effect as those ordered in the prescriptions, but which were naturally much cheaper. At other times—when, for instance, the drug ordered had a very characteristic odor—he simply reduced the dose. He was in the habit of replacing salophen by antipyrin, glycerophosphates by ordinary phosphates, syrup of ipecacuanha by some emetic solution colored to look like the real thing, while all mineral waters sold were manufactured in the shop. In defense, he stated that some of these substitutes were made by his assistant, without his knowledge, and as for the others, his customers had asked for them, so that they might have less to pay. The Tribunal awarded a heavy punishment, but allowed an appeal, which will come up before the court shortly.

ACCORDING to the *Philadelphia Medical Journal*, Dr. Octavius A. White, a retired physician of New York City, has just presented to the United States Senate three paintings of scenes in the Revolutionary war. They are from the brush of his father, John Blake White, whose namesake and grandson is at present a prominent physician in active practice in New York City. One of the paintings represents General Marion in the Pedee swamp offering a share of his meager rations to a British officer who had visited the camp to arrange an exchange of prisoners. The second picture represents Jasper and Newton, two of Marion's men, in their unaided rescue of American prisoners who were being conducted by a strong and heavily armed squad of British soldiers to the prison-camp in Savannah. The third painting shows Mrs. Motte, of South Carolina, presenting to Generals Marion and "Light Horse Harry" Lee burning arrows with which to destroy her mansion, and so dislodge the British. The artist, John Blake White, was born near Eutaw Springs, S. C., September 2, 1781, and died on August 24, 1859, in Charleston, where he had long successfully practiced law. As both he and his son, Dr. White, were natives of South Carolina, it was thought peculiarly appropriate to make the offer to the Senate through Senator Tillman. The offer has been accepted, and provision made for properly hanging these works of art in the Senate wing of the Capitol.

NEW PUBLICATIONS.

DISEASES OF THE EAR, NOSE, AND THROAT.

The classification of the material in the second edition of Dr. Bishop's work on Diseases of the Ear, Nose, and Throat is admirable. Several new subjects have been given space without unduly increasing the size of the book. There is a short sketch on the subject of Autoscopy, which consists of a brief abstract of an article by Thorner, of Cincinnati, but which no doubt gives the subject of direct laryngoscopy as much attention as it deserves in making it supplementary to and not supplanting the use of the laryngoscope.

The section of the work devoted to the ear is the most complete and valuable in the book. The two sections on the nose and throat are too brief and superficial to be of value to one doing special work in these lines. Tuberculosis of the larynx is given but four pages, and laryngeal syphilis but three. There is a new article on pachydermia laryngis, the last paragraph of which, quoted from Heryng, contains some excellent admonitions.

The appendix, with its liberal formulary and sample case-book pages, is a very desirable acquisition to the work, and it is to be hoped may stimulate more careful note-taking on the part of laryngologists and otologists.

Many of the illustrations are excellent. This is especially true of those that are original. The value of the ancient lithographic plates, with their exaggerated coloring, made at a time when laryngology was in its infancy, may well be called in question. They certainly give the student and general practitioner impressions which the laryngoscopic image will rarely verify.

The presswork, the arrangement of the paragraphs, and the heavy-face headings, are very convenient for quick reference.

Diseases of the Ear, Nose, and Throat, and Their Accessory Cavities. By Seth Scott Bishop, M.D., D.C.L., LL.D., Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College; Professor in the Chicago Post-Graduate Medical School and Hospital; Surgeon to the Post-Graduate Hospital; one of the editors of the *Laryngoscope*, etc. Second Edition, Thoroughly Revised and Enlarged. Illustrated with Ninety-four Chromolithographs and Two Hundred and Fifteen Half-tone and Photoengravings. 6½ x 9½ inches; pp. xix–554. Extra Cloth, $4.00 net; Sheep or Half-Russia, $5.00 net. Philadelphia: The F. A. Davis Co.

FRACTURES AND DISLOCATIONS.

On perusing this exceedingly valuable work on fractures and dislocations the reader will at first be struck with the vast influence that the development of skiagraphy has had upon the important subject with which the treatise deals. The nature of various obscure fractures by the aid of the *x*-ray apparatus has been made a matter of no doubt. The present volume, although founded upon the author's previous work, is so entirely rewritten as to make it an entirely new work. The book will be found to abound not only in careful descriptions of the more ordinary fractures and dislocations, but also to contain a vast amount of information regarding those rarer forms of injuries which so often puzzle and perplex the practitioner. Dr. Stimson's work is preeminently the authoritative text-book upon the subject of which it treats, and the vast experience of the author gives to his conclusions an unimpeachable value. The work is profusely illustrated with woodcuts and photographs. It will be found indispensable to the student and the practitioner alike.

A Practical Treatise on Fractures and Dislocations. By Lewis A. Stimson, B.A., M.D. With 326 Illustrations and 20 Plates in Monotint. New York and Philadelphia: Lea Brothers & Co., 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

On the Use of a Mask During Operations.

At the meeting of the Paris Society of Surgery (*Lancet*, March 4, 1899), held on February 21, Professor Berger read a paper on the use of a mask by the surgeon during operations, especially in cases of abdominal section. According to him the particles of saliva given off by the surgeon during an operation form a by no means unimportant source of infection. He had noted the fact through bacteriological experiments that although the silk and other materials used for sutures were always perfectly aseptic before use, yet when once in contact with the wound they gave rise to stitch abscesses, which, though not very serious, healed with difficulty and were very tiresome. Since he had taken to using a mask he had noticed that his operation results had greatly improved. Of seventy operations for the radical cure of hernia performed since October 1, 1897, the date at which he first commenced the use of the mask, suppuration had occurred only in two, whereas formerly suppuration occurred in one out of every five or six cases.

Professor Tarnier said that for his part he had never used a mask and probably should never do so. He considered that sutures were infected by the hands and not through the agency of the breath. He had tried the effect of his hands upon gelatin plates both before and after operations, and found that at the end of an operation they were septic. Sutures must be handled as little as possible, and always taken up with forceps so as to avoid infection.

In reply Professor Berger contended that if the stitches came away it was not because they were infected, but because they came from an infected wound.

Surgical Hints.

The March number of the *International Journal of Surgery* contains the following timely surgical hints:

Whenever you suspect the presence of severe internal injuries, never allow the patient to get up and go about very soon. It is always of great importance to secure as long a period of rest and quiet as possible.

In bony ankylosis there is no pain in voluntary efforts of motion; in fibrous ankylosis there is. In the first, if the physician tries passive

motion, the pain is only where his fingers compress the part; in the latter there is pain all over the joint.

In any of the forms of chronic superficial inflammation of the tongue it is unwise to use caustics. These agents commonly increase the irritation, such cases showing marked tendencies toward malignant development, and must always be carefully watched.

Never treat a severe burn on the flexor part of the joint without applying an appropriate splint to prevent as much as possible the occurrence of contraction. The need of the skin grafting is especially great in all burns where the result of contraction would be deformity or disability.

In dislocations at the shoulder-joint, a rapid test consists in applying a straight ruler to the acromion process of the scapula and the external condyle of the humerus. If it touches both joints at the same time there is dislocation, for in the normal chart the deltoid prominence prevents this.

In young people complaining of pains and swelling in the neighborhood of a joint, especially about the long bones, examine very carefully to see whether the trouble is in the joint. If it affects the bone itself, the chances are in favor of malignant rather than arthritic trouble. If malignant the development is usually rapid. There are usually glandular enlargements. The tumor is uneven in density, the superficial veins increase fast, and the pain is more or less constant and of a shooting nature.

Advantages of the Cataphoric Method of Destroying Cancerous Growths.

G. Betton Massey, in the *Cincinnati Lancet-Clinic* of February 25, 1899, claims the advantages of this method in the early stages of a cancerous growth, whether carcinoma or sarcoma, may be enumerated in part as follows:

1. While removing by immediate devitalization and subsequent separation all evident portions of the tumor as thoroughly as the knife, it does more, in following the migrated cells for some distance into the healthy flesh and there devitalizing them, thus destroying the latent roots of dissemination and recurrence.

2. The cancer is removed without cutting or loss of blood, both of which are looked on with horror by the people, hence patients will submit to it earlier, giving better chances for actual cure before metastasis.

3. As it is now believed that cancer cells may be autografted, this method makes it impossible for the attempt at removal to be followed

by an aggravation of the case by reimplantation on the cut surfaces, as occasionally happens with the knife.

4. Should some cells be missed and local recurrence appear, the application may be repeated with greater ease and effect than a cutting operation.

5. As compared with the caustic treatment, the cataphoric method is dirigible, controllable, capable of following the cells beyond the apparent limits of action, and may be finished at once under ether instead of during many days of pain.

6. Finally its value in non-operable cases should not be neglected. A daily application of 50 to 100 milliamperes of the combined zinc-mercuric cataphoresis, or a single powerful application under ether, will stop hemorrhage, ease pain, destroy all odor, and bring away such quantities of whitish crumbs from the malignant mass that the patient will fancy that a cure will follow, until the possible advance of a metastatic growth previously planted in the liver or other inaccessible location brings about a fatal issue.

Hemorrhage as a Sign of Congenital Syphilis.

In the course of the description of a case of hemorrhagic congenital syphilis appearing as a hemorrhagic vesicular eruption, Dr. William S. Gottheil (*Archives of Pediatrics*, June, 1898) calls attention to the importance of otherwise unexplainable bleedings in infants as symptoms of congenital lues. They may be the only mark of the disease, especially at first; but they are almost invariably accompanied by a diminution of the coagulability of the blood similar to that of hemophilia, and the case usually goes on rapidly to a fatal termination. Disease of the vascular walls is one of the commonest and best known effects of the syphilitic poison, leading to hemorrhagic discharges from the mouth, the bowels, the bladder, or the nose; to blood accumulations under the skin and mucosæ, or in the serous cavities and internal organs; or finally, making the syphilitic eruption itself hemorrhagic. The author emphasizes the importance of remembering these facts in the treatment of infants who have hemorrhagic discharges or a hemorrhagic eruption, the cause of which is obscure.

Subtrochanteric Osteotomy in Faulty Attitudes Following Hip Disease.

Phocas (*Boston Medical and Surgical Journal*, March 2, 1899) formulates the following conclusions on this subject:

1. Linear subtrochanteric osteotomy should be the operation of choice.

2. Under a few conditions mechanical correction and arthrotomy can be employed.

3. Other varieties of osteotomy are rarely indicated.

4. Subtrochanteric osteotomy can in certain cases be used in active coxalgia.

5. Double subtrochanteric osteotomy can be advantageously employed in scissors deformity — in double ankylosis of the hip.

Treatment of Posterior Urethritis.

Ravogli (*International Journal of Surgery*, March 1, 1899) sums up his principles for the treatment of posterior urethritis as follows:

1. Irrigations with the Janet method in a recent case of gonorrhea will in many cases prevent posterior urethritis.

2. Irrigations with the recurrent catheter with permanganate of potassium, followed by injections of protargol, will cure in a relatively short time a case of subacute posterior urethritis without complications.

3. When chronic posterior urethritis lasting for a long time has caused infiltration of the submucous tissues, then the application with a sound of ichthyol salve gives the desired results.

The Treatment of Intussusception in Children.

R. W. Murray, in the *Liverpool Medico-Chirurgical Journal* for January, 1899, says that intussusception is by no means such a common infection as one is apt to suppose it is, and that during the last ten years only sixteen cases of this nature were treated at the Children's Infirmary, and during that period 13,000 new patients were seen. The writer says that in treating this affection, injections by means of water and air have been tried for ages and have given seventy-five per cent of failures, and as primary laparotomy promises better success, it should always be resorted to.

MEDICINE.

The Treatment of Infantile Pneumonia.

Professor Comby, in the *Medical Press* of February 15, 1899, says that formerly no case of pneumonia was treated without energetic revulsives, and the youngest children did not escape the blister. This revulsive may in some cases be prescribed with benefit as a local derivative, but in the child it is never indicated and may do a great

deal of harm. He never prescribes it in pneumonia; it is inefficacious and dangerous, and that is enough to exclude it from our treatment. But if we abstain from the blister, we may with much advantage employ other agents, such as the mustard poultice, dry cupping, local applications of cold water, and even ice. Liquids should be given freely to the patient so as to provoke an abundant flow of urine. It is necessary also to purge once or twice during the disease with castor oil or scammony. If the tongue be loaded and the case complicated with intense dyspnea and bronchial catarrh, the author always orders an emetic consisting of a tenth of a grain of tartar emetic and twenty grains of sulphate of soda for each year of the patient, to be given every half-hour as long as necessary.

The fever runs very high in cases of pneumonia, but it is well known that children bear a high temperature very well. The antithermics, quinine, antipyrin, etc., are of no use unless given in large, that is to say toxic, doses. Cold water acts better and costs less. I have noticed that the cold bath (75° to 65°) was well supported by children, and when resorted to every three or four hours it lowered the temperature, attenuated the dyspnea, improved the pulse, and calmed any agitation, delirium, or sleeplessness that might exist. In cases where the malady is complicated with nervous manifestations, such as convulsions, Comby has found trional to be of great service in five- or ten-grain doses according to the age, repeated two or three times a day; where the heart shows signs of weakness moderate doses of digitalis might be useful, say from one to four grains of the powdered leaves infused in a glass of water and drunk in divided doses during the day.

In every case therapeutical hygiene is absolutely necessary; in some cases only, and according to the symptoms, light revulsives, laxatives, cold baths, tonics, and sedatives may be prescribed.

A Case of Anencephalus.

E. B. Sangen, in the *International Medical Magazine* for February, 1899, reports the following interesting case:

"I was called to see Mrs. G——, aged thirty-five, white, mother of three children. I found her in labor after an indefinite period of gestation. Upon examination I found the os dilated, contents of the uterus high up, but could make out a soft mass. In half an hour I could reach the axilla, left arm, ear, nose, and mouth, and then knew that I had to deal with an anencephalus, having had a nearly similar case fifteen years before. The patient was delivered without special incident of a child normal with the exception of the head. There is a

history of strained marital relations. The mother is of a nervous temperament. She says that during her pregnancy she very much desired a pig's head, which her husband refused to get. She secured one, anyway, and upon her husband's return he threw it into the alley. She exclaimed she hoped God would make her child headless. Was this fulfilment due to maternal impression, or did God intervene?

"The child is apparently perfectly formed, with the exception of the absent brain and skull bones and an epithelial pendulous growth one centimeter from the left angle of the mouth, one and a half centimeters long and one centimeter in diameter at the thickest part. There seems to be an entire absence of brain substance; at least, I could not find any, though the search was not as thoroughly performed as I should like, because the specimen had been in alcohol some months, dissection was difficult, and I should have had to destroy the head to make a thorough examination. What there is besides face appears to be little but bone, that immediately behind the eyes being one centimeter in thickness. The monstrosity was not alive at the time of birth, but the mother had felt movement up to within four days before confinement. The pig's head incident occurred in the third month of gestation."

Diabetes Mellitus and its Treatment During Pregnancy.

From a history of twenty-two pregnancies, F. W. Taylor (*Boston Medical and Surgical Journal*, March 2, 1899) draws the following conclusions:

1. Diabetes may come on during pregnancy.
2. Diabetes may occur only during pregnancy, being absent at other times.
3. Diabetes may cease with the termination of pregnancy, recurring some time afterward.
4. Diabetes may come on soon after parturition.
5. Diabetes may not return in a pregnancy occurring after its cure.
6. Pregnancy may occur during diabetes.
7. Pregnancy and parturition may be apparently unaffected in their healthy progress by the diabetes.
8. Pregnancy is very liable to be interrupted in its course, and probably always by the death of the fetus.

The treatment of diabetes mellitus, says the writer, is not essentially different because of the occurrence of pregnancy. A severe case of diabetes will excrete sugar even when on an exclusively flesh diet, and lose strength and weight, and as such diet may induce or increase albuminuria, it is better to allow a certain amount of carbohydrates,

regulating the amount according to the weight and general condition of the patient more than according to the amount of sugar lost.

Dr. Tyson, of Philadelphia, advises putting a patient on a rigid proteid diet for a short time, then gradually enlarging the diet as the patient will bear it, keeping the sugar in the urine below two per cent, if possible.

Dr. Robert Saundby, of Birmingham, England, says: "Look to clinical results. Test diet by body weight."

It is generally admitted that it is better to allow a definite amount of carbohydrates—for example, a certain weight of bread and potatoes —than to trust to any so-called diabetic foods.

If the patient loses strength rapidly, it is advised to empty the uterus, preferably rapidly.

Clinical Features of Sporadic Trichinosis.

Wm. Osler, in the March number of the *American Journal of the Medical Sciences*, says that symptoms of invasion of this affection are pains in the joints, bones, and muscles. He gives the histories of five cases, and in all of them the patients complained of irregular pains in the muscles and joints and back at the onset of the disease, more particularly of pains in the legs, or of general heaviness in the limbs and aching in the bones. He says that of all the symptoms of invasion, fever is the one which is most apt to lead to error in diagnosis in the sporadic cases. This, with the accompanying phenomena of rapid pulse, headache, stupor, and general symptoms of serious illness, suggest to the physician the diagnosis of typhoid fever. It differs, however, from this affection in that in typhoid fever it is by no means uncommon to have aching of the limbs and back, but it is exceedingly rare to have special complaint of pains in the muscles themselves. Edema in its most characteristic form is seen in the eyelids and over the eyebrows, and it is of great value as a symptom because of its very early appearance in trichinosis, and because of its extreme rarity or rather complete absence in typhoid fever.

Duration of Isolation of Schoolchildren for Contagious Diseases in Russia.

The Medical Council of the Russian Empire (*Rev. Mens. des Mal. de l'Enf.*, August, 1898; *American Journal of the Medical Sciences*) has established the following periods of isolation for schoolchildren who have been exposed to an infectious disease or have themselves suffered from such a disease:

Scarlatina: After exposure, and without development of symptoms,

an isolation of twelve to fourteen days is required. A child that has been ill may be allowed to return to school six weeks after the appearance of eruption, provided there is after that time no trace of desquamation.

Measles: Fifteen days after exposure, or, in case the disease has been present, four weeks from the beginning of the eruption, if there is no trace of desquamation.

Rubella: Sixteen days, or after two weeks from the beginning of the eruption.

Varicella: Seventeen days, or after the fall of the crusts.

Pertussis: Fifteen to twenty days, or after six weeks from the beginning of the cough, if kinks have ceased and there is no expectoration.

Mumps: Twenty-two days, or after three weeks from the beginning of the parotid swelling.

Diphtheria: Seventeen days, or three weeks after recovery, and after the disappearance of hyperemia of the pharynx, larynx, and nose; if bacteriological examination is possible, only after the disappearance of the bacilli.

Variola: Fourteen days, or after the fall of the crusts.

All convalescent patients should receive two or three warm baths at 35° C.

Tuberculosis in Animals.

J. H. Frink, the veterinary inspector for the Department of Agriculture, Canada (*Maritime Medical News*, February, 1899), has from his experience with tuberculosis in animals arrived at the following conclusions:

1. That all animals which contribute to the public milk-supply shall be tested with tuberculin.

2. That milk from tuberculous animals shall not be used for human food.

3. That if milk from tuberculous animals is consumed it shall be sterilized, and if exposed for sale it shall be so labeled.

4. That the milk and flesh of animals suffering from general tuberculosis shall be destroyed absolutely.

5. That cattle which have reacted to the tuberculin test, and on second test have given no elevation of temperature, they and their products shall for the purpose of sale be considered tuberculous.

6. That men or women suffering from pulmonary tuberculosis shall not be permitted to attend cattle which contribute to the public milk-supply.

7. That the refuse, swill, and garbage from hospitals, jails, and

other public institutions which contain large numbers of people, be consumed by fire, and be not allowed as food for animals.

8. That on the determination of the existence of tuberculosis in a herd, no milk shall be sold from it, until the herd is purged from the disease.

9. That as swine fed on the refuse of slaughter-houses are prone to tuberculosis, the public sale of their carcasses shall be prohibited.

10. That every carcass of beef, together with the viscera, shall be inspected, and if free from disease, so labeled and marked.

11. Every municipality shall own and control its own abattoir, and all fresh meats sold in the city shall be slaughtered in it.

On the Absorption of Iron.

A. E. Austin (*Boston Medical and Surgical Journal*, March 2, 1899), after having made a very extended series of experiments on lower animals upon the absorption of iron, has drawn the following conclusions:

1. That iron is constantly being eliminated both in urine and feces even during fasting.

2. That apparently raw meat furnishes an available form of iron for absorption under normal conditions.

3. That inorganic iron as represented by ferrous sulphate is non-absorbable.

4. That albuminates and peptonates of iron are absorbable, but to a limited extent.

5. That organic iron, of which hematin and hemoglobin are representatives, furnishes the most easily absorbable and most valuable of all iron preparations.

THERAPEUTICS.

Antistreptococcic Serum in Epidemic Cerebrospinal Meningitis.

Chas. P. McNabb, in the *New York Medical Journal* of February 25, 1899, reports a number of cases in which this serum was used, and from his observations draws the following conclusions:

1. The antistreptococcic serum has a decided stimulant effect on the nerve centers in meningitic coma, but the same results might follow a warm saline hypodermoclyster.

2. It probably increases phagocytosis, and in this way has some antidotal effect on the diplococcus intracellularis.

3. It probably prevents purulent infection of the exudate, and thus lessens the danger in all cases in which the patients survive the first three or four days.

4. From observation of these cases he is quite hopeful that an anti-diplococcus intracellularis-meningitidis serum can be produced which will have a decided effect in controlling the terrible toxemia of meningitis, and that the associated effect of antistreptococcic serum after the second day will assist in preventing streptococcic infection of the exudate.

5. He is well aware of the fact that the improvement which he saw in these cases may have been a coincidence and not due to the use of the serum, but if it was it was entirely unlike anything he ever saw before in such cases.

Formalin in the Treatment of Whooping cough.

Dr. H. S. Olliphant (*New York Medical Journal*, March 4, 1899) claims to have found in formalin a specific for this most distressing and dangerous disease. He applies it locally in a very weak solution. The writer says that in the formalin treatment the duration of the severest cases was less than a week, and several cases were cured after three applications. The mortality of this disease is classed third in the list of dangerous diseases peculiar to children. The heavy death-rate is doubtless due to complications arising during its long and exhaustive course under the ordinary treatment. With the formalin treatment, after the third application to the throat, marked improvement was observed, and in one case a complete cure. The writer says he looks upon pertussis as simply an infection of the fauces, a place perfectly accessible to infection and therefore curable in a few days. Free emesis follows each application, thereby dislodging the germs as well as destroying them. Out of twenty cases treated with this remedy, not one failed to be cured in less than eight days. The writer warns against using too strong a solution in cases of young and debilitated children.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Eczema, a Parasitic Disease.

According to the *Edinburgh Medical Journal*, Dr. Lereddo has written a small work ("L'Eczéma, maladie parasitaire," Paris, 1898, Masson et Cie.) to prove that eczema is in its nature parasitic. He

states that in acute eczema the vesicles always contain parasites (morococci of Unna), and that cultures of these can be inoculated and reproduce acute eczema. Every solution of continuity in the skin may be the starting-point of an eczema, and if it starts, auto-inoculation of neighboring or distant parts is easy. It is even in some cases contagious. The morococcus of Unna is found most frequently alone or associated with other microbes in the vesicles of acute or chronic eczema. It is a coccus of variable size, and its growth seems to be favored by lesions which alter the trophic conditions of the skin (as varicose conditions). Dermatitis, artificially produced, as by the use of cosmetics or medicaments, may give rise to conditions predisposing to an outbreak of eczema, as may also certain diatheses (gout, diabetes), nervous affection, or affections of the digestive organs. He traces the relation between eczema and other skin affections, and shows that nutritive, gastric, or urinary troubles play a very important part in the pathogenesis of eczema, which is very often only a later manifestation of these diseases. It would appear that eczema is only a secondary affection due to more general causes.—*Philadelphia Medical Journal*, Feb. 25, 1899.

A Study of Eczema.

In a paper entitled "A Contribution to the Study of Eczema," Leslie Roberts, M.D., dermatologist to the Liverpool Royal Infirmary (*British Journal of Dermatology*, February, 1899), comes to the following conclusion: It is not to be expected that we can draw up a catalogue of irritants capable of exciting eczema. Even though our knowledge were exact and deep enough to enable us to do this, it would after all be a personal list. The irritant which suffices in one person might be incompetent to produce eczema in another; and even in the case of the same irritant its action, judged in the light of visible results, would be subjected to the modifying influences of age, season, and conditions peculiar to the individual himself.

No doubt if we possessed exact information in respect of the chemical character and constitution of the epithelial metabolites formed within the cells under the influence of stimulation, and especially if we could isolate these metabolites in sufficient quantity for inoculation, we should have very different ideas of the origin of eczema from those we now so vaguely possess. But beyond the observation detailed above, that stimulated human epithelium produces a proteolytic ferment, nothing is known of these metabolites.

It has afforded the author very great assistance to regard all the causes of eczema as "epithelial stimuli." It is a strictly physiological

and scientific term, and in his mind it has entirely replaced such terms as "diathesis," "constitutional disorder," "debility," "gouty or rheumatic states," and other learned disguises of ignorance. He regards every case of eczema as an example of overstimulated epithelium. In clinical work we judge of the degree of overstimulation by the amount of plasma effusion, microscopically by the severity of cell colliquation, but possibly we could judge more accurately by the determination of the amount and kind of variation in the electromotive currents of the inflamed skin.

So far as his observations go the author believes the stimuli leading to eczema seldom, if ever, act singly, but as complexes. Mere sunlight or mechanical irritation, such as the friction of a collar, can hardly in themselves suffice to precipitate, as it were, a true eczema. But if to these or to other external stimuli we add the stimulus of overstimulated nerves, acting for a lengthy period, and producing a functional alteration in the epithelia—or, instead of nerve, we may say the depressing stimulus of cyanosis—then the combination of these factors, or these and others of which we are yet ignorant, may suffice to arouse that train of physical and chemical phenomena which we include under the title of eczema. He has no reason to say that the cooperation of an atmospheric stimulus is essential for the precipitation of an eczema, but it is a factor of far too great importonce to be overlooked or belittled.

Intravenous Injections of Mercuric Cyanide in the Treatment of Syphilis.

Chopping (*Lancet*, Feb. 18, 1899) believes that for hospital practice, for the more serious lesions and for cases that can be seen daily, the intravenous injection of mercuric cyanide is far superior to the other methods employed in the treatment of syphilis. He employs the method as follows: The arm is rendered aseptic by washing with a solution of carbolic acid; a rubber tourniquet is applied to the upper part of the arm to make the veins stand out. A fine needle of a hypodermic syringe, containing twenty minims of a one-per-cent solution, is then introduced into the chosen vein in the direction of the blood-stream. The tourniquet being removed, the fluid is injected into the vein, the needle is withdrawn, and an antiseptic swab applied to the point of puncture for a few minutes. Such an injection is repeated every morning, unless contraindication exists. The advantages of this treatment are: (1) The injection is made daily and the patient is under constant observation; (2) the exact quantity of mercury introduced into the system is known; (3) the patient is rapidly brought under the influence of the drug, a marked advantage where it is neces-

sary to produce the full effect of the drug as speedily as possible; (4) the rapid clearing up of the serious lesions and the visible evidences of the disease; (5) its efficacy in cases which will not respond to the ordinary methods of treatment.

The author gives a tabulated record of eighty-four cases treated in this manner. The complications met with were very slight and rapidly disappeared. All the cases, with one exception, showed very marked and rapid improvement. The average stay in the hospital was 23.2 days. In the worst cases other adjuvants, such as cod-liver oil, iron, correct diet, were resorted to. In all cases special attention was paid to the general health of the patient. In the tertiary and some rupial cases the iodides of sodium and ammonia were used. All cases on being discharged from the wards were advised to undergo a further and prolonged course of the ordinary methods of treatment in the out-patient department of the hospital.—*Philadelphia Medical Journal*, March 11, 1899.

Iodoform Eczema: A Family Idiosyncrasy.

A. W. Esler, M.D. (*Australasian Medical Gazette*, Nov. 21, 1898), describes, under this heading, a rather interesting case of iodoform eruption occurring in a man who had his ankle dressed with this drug after a deep ax wound. The patient was first seen on August 3, 1897, and was then dressed with cyanide gauze. In four days the wound was healed (?), and was then powdered with iodoform and a pad of dry lint applied. The next day there was some eruption around the wound, but the dressing was continued. The day after this the eruption had spread up to the knee, there was a large crop of pustules and vesicles, and the edges of the wound gaped slightly. The patient then mentioned for the first time that he had been dressed with iodoform twice before in his life, and each time he had suffered from an eruption after the application. He also stated that his father and one sister were very susceptible to iodoform, the drug causing an eruption of blisters in both of them when used. The patient made an uninterrupted recovery directly the dressing was changed.—*British Journal of Dermatology*, February, 1899.

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ORIGINAL CONTRIBUTIONS.

SOME REMARKS ON TROPICAL MALARIA.*

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The truth of the remark that "War is hell" was probably not actually brought within range of popular conception until last September, when those who had suffered on behalf of their country began to return home. Those who visited Harper Hospital at that time will probably never forget what they there saw—a number of young men whose fine bodily outlines showed them to have been built in heroic mold, prostrate with disease; men whose patient countenances, though tanned by a tropical sun, were pallid from impoverished blood. The silent appreciation of these men for their care testified to the fortitude of spirit with which they had endured the hardships of a soldier's lot. "The sickliest lot of men I ever saw," was again and again the remark made by seasoned practitioners, who knew what disease was, and had seen it in wide-spread and terrible epidemics.

One of the first difficulties which presented itself in the care of these unfortunate men was that of protecting them from the sympathies of the benevolent. Those who had accompanied these invalids on the train had been surprised to find the cars conveying these desperately sick men boarded at every available point by well-meaning and kindly disposed women, who administered to their fever-stricken occupants almost anything they would take—pies, peaches, pop-corn, and peanuts. One kind-hearted woman would give a man a drink of what was called "grape-juice," a concoction with which Dives would not have asked Lazarus to slake his thirst, and she would be followed

*Read before the Detroit Medical and Library Association.

by another who would give him some milk, and then by another who would give him some brandy. When safely established in the hospital the institution was soon besieged by a crowd of charitably disposed people, who wanted "to see the soldiers." The paramount desire of each visitor seemed to be to go to each soldier and personally administer a drink of some cordial. This, however, must all be forgotten. Sentimentalism gives color and fragrance to life, and no gifts did greater honor to the hearts of the givers than those which were offered in this cause.

The first difficulty which presented itself was one of classification —that of assigning these fevers to any familiar type. They seemed for the most part intermittent in character and so excluded estivo-autumnal infection. The fastigium did not necessarily appear at any particular date, and it was difficult at once to assign them to their separate classifications of tertian, quartan, and estivo-autumnal types of fever. Where the thermometric readings obscured the type, the microscope, however, being brought into requisition, soon revealed it. A few of these charts will show how difficult the diagnosis would have been had it not been for these more precise methods of diagnosis.

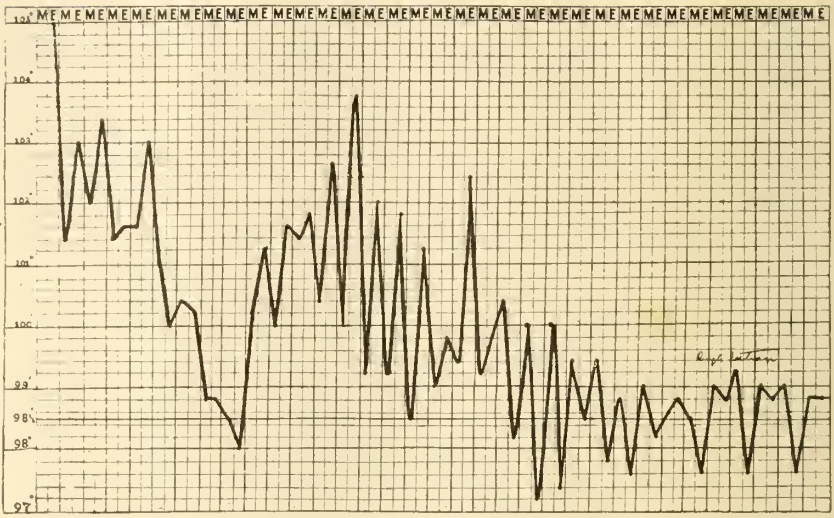
As we became more familiar with our first group of patients, we began to be able to decide the nature of the infection by the history of the case. The estivo-autumnal cases would say they had "more fever than chills." The cases of tertian infection would invariably give a history of severe rigors. The majority of the seventy-five cases which came under my care during my service at Harper Hospital were those of tertian infection. In nearly all these tertian cases the fever, however, was of quotidian type. To meet this phenomenon the bacteriologists have invented the theory of double infection. The evolution of the parasite of tertian fever takes forty-eight hours; if the type be quotidian two infections are considered to be operative.

Among the surprising features of these temperature charts will be found the sudden remissions. The most striking instance was one occurring in the service of Dr. Duffield, in which between the paroxysm and its remission eleven degrees were registered. Of the different forms of malarial fever several were observed. One case presented the gastric form, in which the patient was seized with severe and uncontrollable vomiting. One case of quartan fever exhibited the cerebral form. He passed into the state of coma vigil, from which he was resuscitated by hypodermic injections of quinine. The dysenteric form was common. One case was so unlike a malarial fever case that it would have been considered a simple case of dysentery had not the plasmodium been present. He narrowly escaped with his life after the most persistent treatment, flushing of the rectum, and the

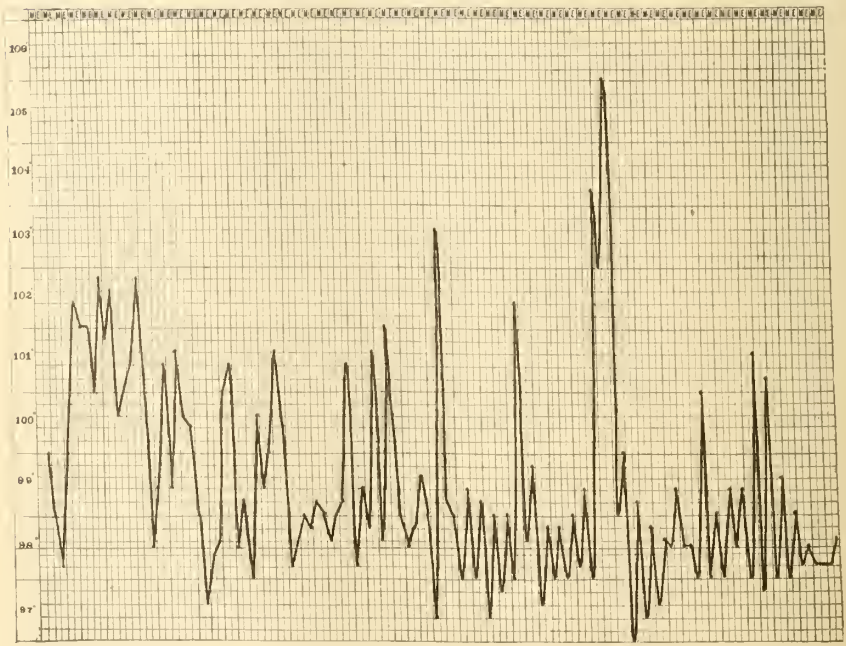
employment of other recognized expedients. Hemoglobinuria was observed in two cases. Enlarged spleens, some of them of extremely large proportions, were observed in nearly all cases. The blood changes in nearly all our cases were very striking. A marked oligemia prevailed. The examinations, made by corpuscle count, revealed reduced value in both white and red elements. One case showed but slightly over two million corpuscles per cubic millimeter —nearly seventy per cent reduction. Unfortunately no studies in relative leucocytosis at paroxysmal periods were accomplished. In nearly all the cases abundant parasites were found, sometimes the early ring-shaped forms showing recent sporulation, sometimes only hyaline and crescent forms. Only two of the cases from Santiago were those of typhoid fever. These died the day after their admission to the hospital from collapse due to intestinal hemorrhages. We had no opportunities to decide if mixed infection were present in these cases. However, it has elsewhere been determined that the old army surgeon's belief in typhomalarial fever is true. The coexistence of the two infections has been frequently observed among the returned soldiers. The Widal test was tried in the majority of cases. It was invariably negative in the malarial cases. Later, when fifteen cases of typhoid from Island Lake were added to our list of patients, the Widal reaction proved equally affirmative. To determine between malarial and typhoid the Widal test is very satisfactory, but between typhoid and many other conditions it is not.

The treatment of these cases finally resolved into simple lines. An appropriate diet, always remembering that the disease was not typhoid, and no intestinal lesions were expected; cold bathing at periods of hyperpyrexia, or sometimes the external use of guaiacol. For internal medication, quinine came in time to be exclusively used; large doses, sometimes hypodermically, more often twenty to fifty grains by rectal suppository, at the period of apyrexia. The value of quinine is undoubtedly greatest at this period. It should be remembered that quinine should not be given as in old days to bring fever down, but to prevent it going up. Had I the treatment of these cases again, I should use intravenous injections of quinine by the Baccelli method.

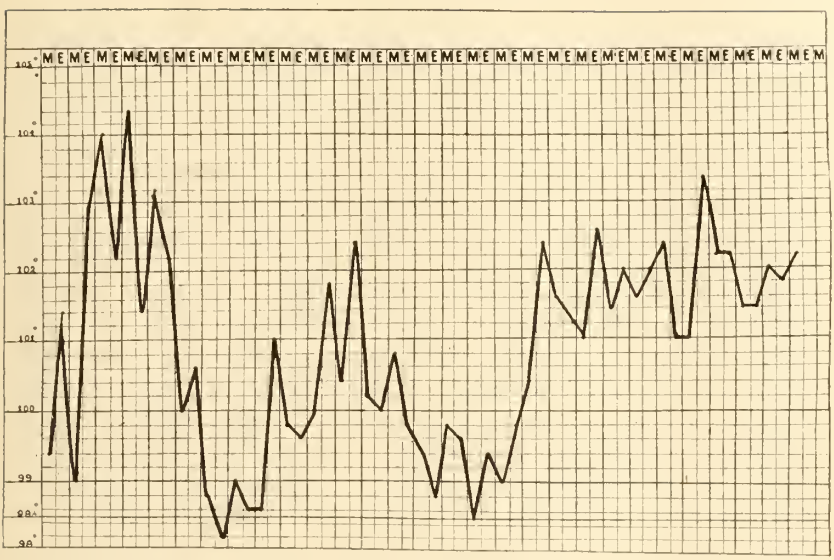
Until last year the search for the plasmodium of human blood outside of man had been fruitless. Malarial organisms had been known to exist in birds, but it was not known how they came there any more than it was known how the parasite entered the human body. The evolution of one of these avian parasites, halteridium, had been worked out by McCallum, of Johns Hopkins; another, proteosoma labbe, had been studied by Italian observers. Laveran himself,



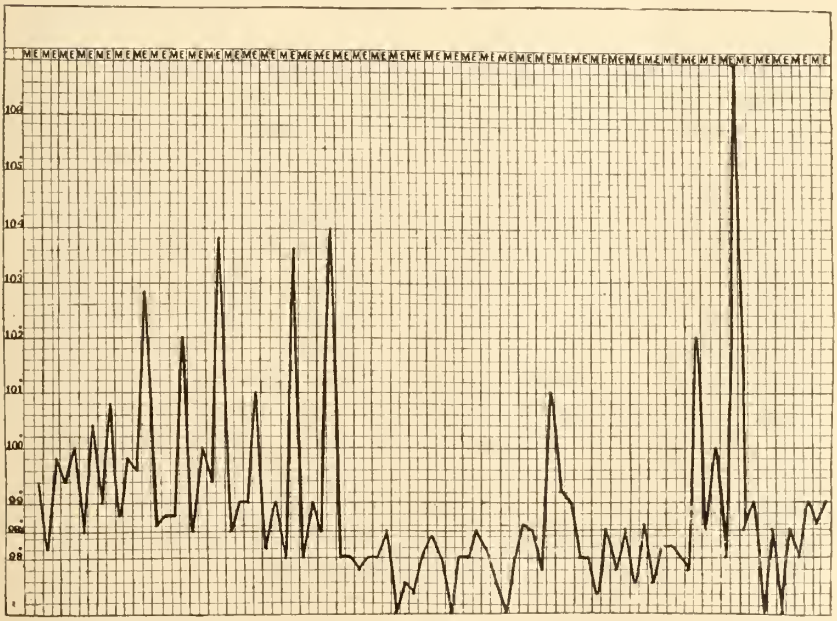
C. H., 32d Michigan Infantry: Tertian fever; ring and hyaline bodies; double infection passing into single infection.



G. C., 33d Michigan Infantry: Quartan parasite; quartan fever; double type.



W. J. W., 33d Michigan Infantry: Tertian fever, mixed type, crescent bodies; toxemic secondary temperature. Death from endocarditis.



E. B., 9th U. S. Cavalry: Single tertian infection; rosette parasites, showing action of quinine in 40-grain doses on eighteenth day. Pseudocrisis preceding precriticum.

the discoverer of the malarial hematozoon, had long ago thought that the mosquito might be an agent in the dissemination of malarial disease; but Patrick Manson was the first tentatively to advance the hypothesis that "the plasmodium is a normal parasite of the mosquito, or of some other suctorial insect, passing from mosquito to larva, and from larva to mosquito, in never-ending series." Manson had based this prediction on his former discoveries connected with the blood parasite, filaria sanguinis. Manson had made endless studies of the flagellum of the organism, and had maintained that this appendix would be found in some way connected with the life of the parasite outside the blood-corpuscle of man. Bignami had previously suggested that this flagellated body had no existence during the intra-corpuscular life of the parasite. He showed that if blood be taken under vaselin—that is, under conditions which prevented atmospheric changes—the flagellated body would not be seen. Many distinguished bacteriologists have maintained that the flagellated body is a degenerative feature in the parasite's life, a sure indication that it was about to die. Bastianelli, Bignami, Grassi, and the Italian school still adhere to this belief. Manson maintained the opposite proposition, that the flagellated body was a sign of vitality, a certain indication that the organism was about to assume a new phase of existence, and that the flagellum itself represented the reaction of the organism to a medium of increasing viscidity.

The confirmation of Manson's hypothesis was worked out by Surgeon-Major Ronald Ross, in India, in a series of investigations which were as painstaking as they were brilliant. Ross first of all found that the mosquito in imbibing human blood ingested the parasite, and he observed the formation of the flagellated body in the stomach of the mosquito. Having thus far confirmed Manson's notion that the flagellum was connected with the extra-corpuscular life of the parasite, he proceeded to work out the problem in birds. Birds, as has already been stated, suffer from two kinds of malarial organisms, one known as halteridium, and the other as proteosoma. Ross allowed birds afflicted with proteosoma to be attacked by mosquitoes, and again found the malarial organism to enter the mosquito's stomach. An hour later, examining this mosquito, he found certain oval pigmented bodies in the muscular lining of the stomach, which he inferred were a developed stage of the proteosoma, for in hundreds of test experiments these pigmented bodies only occurred in mosquitoes fed on proteosomatous birds. That these bodies were evolutionary forms of proteosoma was almost confirmed by the previous example of halteridium, the other malarial parasite of birds. In this organism, after the flagellum had broken away, it entered the pigmented halteridiæ,

and these being transformed into traveling vermicules possessed the power of entering the corpuscles. In other words, a sexual process resembling the embedding of the spermatozoon in the ovum took place. Ross inferred the same thing to occur in proteosoma, and that the traveling vermicules entered the mosquito's stomach and there became the pigmented bodies. The further course of evolution of the proteosoma in the stomach is highly interesting. It grows in size and projects rounded bodies beyond the stomach walls. These Ross terms proteosoma coccidia. These coccidia undergo changes of appearance. Pigment comes and then disappears, but the coccidia finally burst and from them emerge germinal vermicules. These vermicules Ross found practically infested all the tissue of the mosquito, and what was highly important these forms were discovered in the venemo-salivary glands of the mosquito. The climax of these brilliant investigations was now within easy reach. Ross allowed mosquitos to feed on birds afflicted with proteosoma, and after a few days he fed them on birds whose blood was void of parasitic infection. The blood of the latter in a few days was filled with proteosoma, thus establishing the fact that the mosquito acted as an extra-corporeal and intermediate host of the malarial parasite of birds.

During those eventful days from the first to the fifth of July of last year, some 17,000 troops slept on the ground in the vicinity of Santiago de Cuba. As a result of this, some 10,000 or even more were stricken with malarial fever. General Brooke estimated the sickness to have attacked eighty-five per cent of his men. How grave was the nature of this sickness has been seen from the cases treated here, where in a first-class hospital and a suitable climate, and with every hygienic and sanitary appliance, many died, and in all convalescence was protracted and recovery deferred. When we remember that in malaria we have a disease whose mortality is only exceeded by tuberculosis, it becomes a problem of supreme importance to determine whence men derive this infection and in what way it can be prevented. How the maleficent germs of malaria exist in the environment, and how they return from that environment to infect man and the lower animals, are two problems of enormous significance upon the solution of which the welfare of the race positively depends. We have seen many theories regarding the etiology of malaria rise and set and have their day. The inhalation theory, which until recent date prevailed with the best show of reason, must now be deemed almost ripe for abandonment. Bignami's last experiments show that the malarial parasites of the blood do not resist a brief desiccation, and that in the peribronchial glands of those coming from highly malarious countries no form is found which might be interpreted as being of a parasitic

nature, and this would certainly be expected if the parasite were inhaled as dust. The preponderance of modern evidence goes to prove that malaria is distinctly an inoculable disease. This theory has recently been put to the severest test to which any theory can be put —the test of fulfilled prediction, for malaria has now been actually imparted by inoculation.

During August and September of last year, while our boys were being inoculated by the Cuban mosquito, in a gauze-curtained room in the Ospidale di San Spirito, in Rome, an interesting series of experiments was being conducted under the direction of Dr. Amigo Bignami, to whom, among others of the Italian school, we are largely indebted for nearly all that is known about malaria. This was an attempt actually to transmit malaria to man by the inoculation of the mosquito. The first experiment, made in July, failed. The second, which ended August 8, also failed. The third experiment was on a man named Sola. He was thoroughly bitten by mosquitoes, and developed a little malaise and headache, and that was all. These failures led to a more complete study of the mosquito, of which there are many varieties. Ross, in India, had come to the conclusion that the common mosquito was a harmless insect, for his experiments were only successful with the large gray mosquito. Grassi, an associate of Bignami, captured at Maccarese, a place about twenty miles from Rome, on the Civita Vecchia road, where a severe form of estivo-autumnal fever prevails, three species of mosquitoes. With these the fourth experiment was made. On the first of November a patient bitten by these mosquitoes had a severe rigor, and on November 3 his temperature reached 105°. On the evening of this day the estivo-autumnal parasite was found in his blood. The patient was an old soldier, who had been in the hospital six years and had never had fever. Since this case another inoculation has been successfully accomplished. Further studies have revealed nearly beyond all question that the common mosquito, *Culex pipiens*, is not an intermediate host. Among the Maccarese mosquitos, *Culex penicillaris* is considered to be the undoubted intermediate parasite host, as is also the *Anopheles claviger*. It seems to be proven that some mosquitoes are intermediate hosts; all are not. I questioned these patients from Cuba closely about mosquitoes. All had been bitten. Many complained bitterly of the virulence of the bite. Most of them described it as very poisonous. It was usually given by a large mosquito with spotted wings. One man described it as "the biggest bird of that kind he ever saw." That malaria is an inoculable disease now seems proved. The life history of the mosquito, however, makes it possible that paludism and water poisoning may still be means whereby the parasite enters the

human body after its evolution in the intermediate host. The female mosquito dies in swamp water, the male on the land. Swamps have always been associated with malaria, probably for this reason. That malaria may sometimes be inhaled is also plausible on these premises.

In acquiring new possessions, America has assumed new duties. If malaria be dependent upon the mosquito, the malaria problem has been much simplified. Science has but to discover the means of exterminating this maleficent insect. We have seen Ross furnished with ample means for prosecuting his splendid researches in India. Koch has been sent by his government to study malaria in Africa, and has returned a convert to the inoculation theory. In Italy, where 84,000 people die annually from malaria poisoning, the services of men of science have frequently been subsidized. Is it not the duty of rich and prosperous America to take her part in these investigations, and to strive for the proud distinction of enumerating malaria among preventable diseases?

FRACTURE OF THE ARTICULAR PORTION OF THE ASTRAGALUS, AND A FRACTURE OF BOTH BONES OF THE FOREARM, ONE THREE WEEKS AFTER THE OTHER; WITH A RADIOGRAPH OF BOTH FRACTURES.

BY ANGUS MC LEAN, M D.,

Attending Surgeon, Harper Hospital; Lecturer on Anatomy, Detroit College of Medicine, etc.

These are rare and interesting fractures. The former I have not seen described in any literature on the subject of fractures about the ankle, and this one could not have been diagnosed had it not been for the Roentgen rays.

The patient who met with this misfortune was a traveling man aged forty-three, who was running down a grade to catch a steamer last October. He stepped on a small stone, producing an eversion of the foot. He limped aboard the boat, and for a few days walked about, aiding himself with a cane. The swelling and pain gradually increased, and he came to Detroit to consult his physician, Dr. R. E. Mercer. On examination he found the deltoid ligament ruptured and thought that he could detect crepitus, but could not locate any fracture. He applied a plaster splint and had the patient keep quiet for several weeks. On removing the splint the patient still complained of pain on walking for any length of time. The splint was reapplied for a few days, but without any improvement. Dr. Mercer then consulted with Dr. S. G. Miner, who diagnosed some sort of bone trouble from the symptoms given, and the patient was fitted with a lateral steel ankle brace.

The gentleman had an accident policy in the United Commercial Travelers' Association, which requested an examination of the injury by its surgeon, Dr. J. B. Kennedy, of Detroit. As there were no objective symptoms at the time, not even tenderness on pressure over the ligament, the surgeon was in doubt as to just what was the extent of the injury. I was requested to see him, and did so on January 28, 1899. At this time there were no objective symptoms, not even tenderness on pressure over the ligament, but the patient complained of pain and a grating sensation after walking an hour or so, even with the brace on. We were at a loss to know just what was the trouble and suggested the use of the Roentgen rays, not expecting much information from their application, but desiring to give him all the benefits of a doubt, as the company had refused to pay an indemnity for the

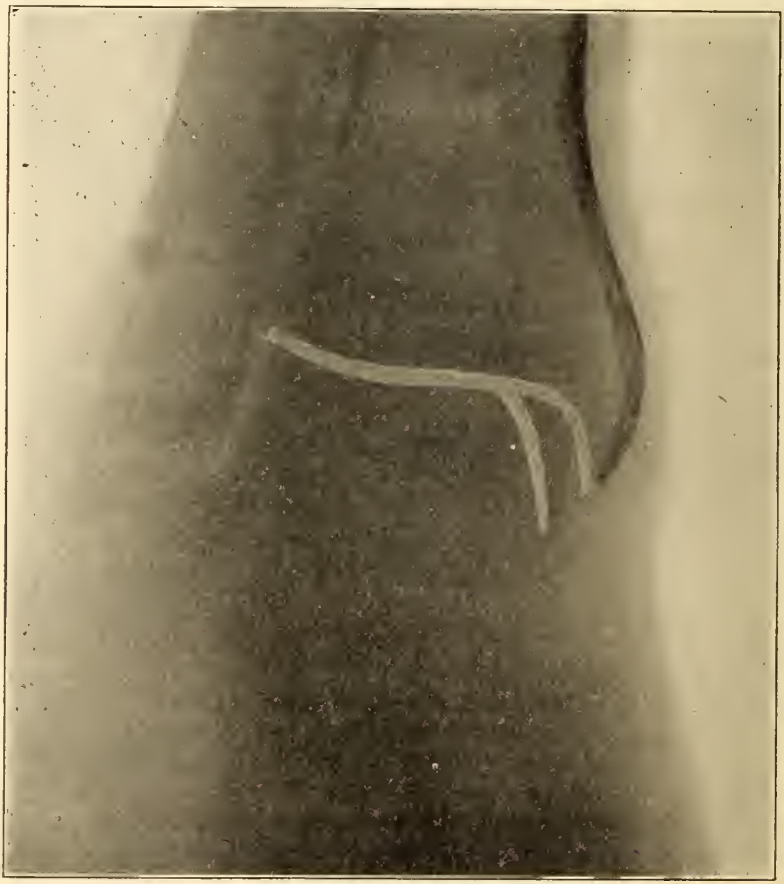


FIG. 1.

whole time, not thinking that a sprain would totally disable a man for three months.

Two radiographs were taken, one lateral and one anteroposterior. The latter, shown in Fig. 1, exhibits a fracture of a small portion of the upper and inner articular surface of the astragalus, that portion which comes in contact with the outer surface of the inner malleolus. Just where or how the violence was exerted to produce this fracture is speculative. There may have been a pathological weakness at the point, or it may have been that in the partial dislocation, the astragalus became wedged and twisted in between the malleoli, and the sudden violence produced while running may have aided in separating this fragment. The history and symptoms following were such as would be given from an injury of this kind. The company settled his claim in full on receiving the exact evidence shown by the skiagraph; thus showing one of the legal as well as practical benefits in its application.

In the other fracture the patient gave the following history: On the 25th of February last, while at work in a cellar, he was hit over the left forearm with a shovel. After a few moments he tied a handkerchief around his arm and kept on working as if nothing had happened. Some swelling followed, but he thought that he had simply sprained his arm and kept at work the same as before. Three weeks from this date he was putting a collar over a horse's head. The horse became

FIG. 2.

frightened, and crowded him against the side of the stall with his arm extended, causing considerable pain. He did not use his arm that day, and on the following day his wife advised him to consult a physician. He went to see Dr. G. S. Field, who referred him to me. There was very little displacement and very little pain on motion, while crepitus could be distinctly heard; but he thought that there was not much the matter with the arm. From the angular motion that could be produced in the fracture without much displacement of the fragments, I thought the condition peculiar and had a radiograph made, which is here shown (Fig. 2). The radiograph shows a complete fracture of the radius and an irregularity in the ulna in the lower portion of the middle third of the shafts, but there seemed to be no loss of continuity in the ulna. There is, however, an accumulation of denser tissue around the bone at this point. This would indicate that there had been a fracture at some time previous, as is borne out by the history as given. The fracture of the ulna was undoubtedly produced by the first injury, and union had partially taken place when the second accident occurred, the ulna bending at the time the radius was fractured, and its extremities were retained in position by the callus which had been thrown out. There was no severe pain or complete loss of motion at any time, for each fracture was supported by the accompanying bone, thus preventing any contraction and limiting misplacement.

These skiagraphs were taken by Dr. John J. Marker and Mr. S. M. Keenan, of the Wayne County House, Eloise, Mich.

STRENGTH HUSBANDING.

BY ROBERT BRUCE, CLINTON, NEW YORK.

It has been said, time and time again, by his patients, that the Successful Practitioner, who is also something of a Philosopher, carries the *elements* of healing in his personality, and in his wise counsels, and that he habitually uses them to supplement the application of his scientific knowledge. The varied experiences of a half-century of active practice have given a ripeness to his thought, a calm balance to his judgment, and a subtle value to his advice which all with whom he comes in contact have learned to value and respect. The youth hesitating between two careers, the maiden desirous of balancing or overthrowing the judgment of her personal affection by wise counsels, the business man looking after his health as carefully as after one of his properties, are but single types out of the many who have gone out of his consultation-room strengthened and renewed

in body or in mind, or both. In a word, he aims to be a physician to the whole man.

A nervous, overwrought, business man came, half-trembling, into the private office of the Philosophical Practitioner not long ago, and sank, all but exhausted, into the nearest easy chair. His physical and mental vitalities had been spent in the most prodigal manner—twelve hours a day at the office, preceded by two hours of worrying in the morning, another two or three hours at night, followed by broken sleep, had sapped the natural strength of his body and brain, and he was, as he himself had suspected, on the ragged edge of nervous collapse. "Oh!" he gasped, "if I could only get back the vitality of my youth!"

"So that you might spend it all over again, I suppose," interrupted the Practitioner, with feigned indifference to the condition of his patient. "The possession of vitality is hardly more a matter of natural endowment than of rational economy in drawing upon one's stock of physical and mental resources. It is as much a matter of folly to strive to build up a vigorous and healthful vitality, if the nervous system is to be drained by all the means known to *fin-de-siècle* experience, as it would be to open all the sluice-gates of a reservoir, and expect, by improving the watershed, to maintain the former level. He is a poorly equipped business man who forgets the operations of the laws of supply and demand, and the same law operates, with equal indifference to individual likes and dislikes, in the realm of bodily powers. The highest type of nerve power is one of the normal results of the quickening of human brain in an age of unparalleled progress, but nervousness—or more properly, continued nerve tension—eats insidiously at the roots of vitality, capacity, and facility, and brings into existence insomnia and a host of kindred evils. When Sir Austin Ledyard was told that the Arabs knew no narcotics, he inquired what they did when any one could not sleep. 'Do!' replied a practical son of the desert, 'Why, we set him to watch the camels.' This answer contains a bit of sound philosophy, for it is true that no one can vigilantly watch, or work with the highest effectiveness, unless he can also soundly sleep; and we are told, moreover, that insomnia is practically unknown in the desert. The perpetually alert mind—always at a tension—at last becomes preternaturally irritable, and finally the powers of perception are dimmed, and the force and accuracy of the intellect diminished. The distinction between substance and shadow becomes less marked, and often the nervous tension grows more and more acute until a crisis intervenes, and the workers in the ranks of business are lessened by one."

"I realize," replied the patient, partially regaining his composure,

"that as a class American business men lack repose. A large proportion of us are afflicted with nervousness, which varies in intensity from trivial habits and mannerisms to actual illness. We drum with our fingers or pull flowers to bits. We twist and untwist scraps of paper, and tap the floor with our feet. We gesture violently without provocation, and sway back and forth in our chairs. All this occurs in ordinary conversation, and passes for vivacity. It is generally regarded as not only perfectly innocent and natural, but as a desirable method of working off superfluous energy. As a matter of fact, however, I suppose that these modes of expression and action are most unnatural, and waste our vital energies in the most prodigal manner. I imagine that they are serious indications of wrong attitudes of mind and unwholesome modes of life. We work too intensely and throw our whole beings into every trivial act. We talk with our hands, and our eyes, and our shoulders, as well as with our voices. We push with our feet on the floor of the carriage, street-car, or railway coach, as though to hurry the too slow movement of the wheels. We listen with tense muscles to every sound, and then wonder at the close of the day why we are so exhausted in body and mind."

"It is not work, but lack of repose, that is the cause of the nervous prostration and breaking down, characteristic of modern conditions," answered the Practitioner. "Nature never intended that the whole of the body should work all the time, or even at any one time. In accordance with the universal law of rhythm, she designed the different members to alternately work and rest, relieving and sparing each other. When we disobey this law of repose, there is a constant friction that must in time wear out the mechanism. The result is chronic fatigue, not so much from overwork as from unnecessary work. When we learn to use only those muscles which are intended for a particular act, we will expend but a small proportion of the vital energy we now lavish on our work, and we will have a reserve force which will save us from premature decay, and tide us over disease. What tired and nervous people, especially those carrying business responsibilities, need more than anything else is change. They should manage to get away from care at frequent intervals, and go cycling, sailing, rowing, or tramping for a day or two now and then. A number of frequent respites is worth vastly more than one long vacation, for the monotony of rest soon becomes more burdensome than the monotony of work, or even overwork. Frequent changes of scene and air, and rational exercise, are the best of all medicines for the nerves."

"The perfect rest theory for nervous troubles, in my experience, comes far short of the root of the matter," again ventured the patient. "The idea of gaining power through repose is a good one to a certain

extent, yet I think it fails as a resource and remedy of general application. Unquestionably we are, so far in our national and commercial experiences, the most nervous of people. Much of this may naturally be due to heredity and race mixture, but a great deal more may safely be ascribed to climatic influences, and to the uncontrollable eagerness begotten of unparalleled opportunities. Work, especially brain work, for nervous invalidism may be advocated on such high grounds as to entitle it to serious consideration and respect. It is recommended as not simply morally needful, but as a methodical medical treatment. If our natural environment is amid labors of every kind, why should not labor become, at times, a relief as well as, on the other hand, a necessary drudge? Among brain workers Sir Walter Scott is a case conspicuously in point. He illustrated as no other man of his time the new theory that, as a practical and complete remedy for disappointments, wrecked hopes, overwhelming disaster, dejection, and grief, brain work is sovereign. Instead of giving way to his feelings on the occasion of the utter failure of his publishing ventures with the Ballantynes, he resolutely refused to indulge in weakening regrets and useless complaints, but set to work in the most heroic manner to clear off his gigantic debts, the very thought of which would have crushed one who suffered his sorrowful sensations to accumulate without transmitting them into some form of healthy and voluntary activity. Whether he lived to clear up the entire mountain of debt or not, it is certain that he lived longer than he would, and accomplished immeasurably more than he could, if he had not relieved the congestion of his sensations by the voluntary action of fresh productiveness. No doubt he thus preserved health and life together."

"The trouble with good examples," replied the Practitioner, after a pause, "is that they are overlooked by those who need them most, and heeded by those who need them least. Now, there is no need of showing examples of industry to men of your stamp; but it is necessary for you to employ some of that judicious idleness, or recreation, if you like that word better, which we so much deplore when carried to an extreme by chronically weary people. We ought at least to come to that point of view where we are willing to use the same common sense with regard to our own physical and mental powers that we instinctively do with regard to our business, our engines, and even our live stock. If your driver should abuse your horse as you habitually do yourself, you would have him arrested for cruelty to animals. This is such a busy age that it seems like labor lost to discuss the good effects of judicious repose. Life is carried on with a rush that admits of no cessation; the panorama of every day shows a mass of on-pushing, struggling figures, and he who steps aside for a moment's

rest seems liable to be left behind. It seems to be one of the deadly commercial sins to stop for the sake of mere rest. 'Go, going, gone sum up the brief epitome of daily business life. The things that one man can achieve in this rush are wonderful; what before men were content to spread over years of planning and toil is now accomplished in weeks or months. Energy is concentrated to its limit; hurry is the watchword of the hour; 'slow and sure' is a motto long since passed out of use—'quick and risk' has elbowed it out of the way of enterprising people. Fortunes are made in a day; cities are built in a month; and the world itself seems revolving on an axis of electric haste.

"But in this rush human vitality is used up at a terrific rate, and it is not uncommon to hear of successful men falling dead when barely in their prime. In thirty or forty years they have lived seventy or eighty. Science and discovery are throwing so many safeguards around human life nowadays that if men would only avail themselves of all the advantages offered them, good old age would be the rule rather than the exception. But they ignore the great natural law of alternate work and rest, and to ignore the laws of Nature is to invite certain punishment. A man's body, with all its power, is his servant to do his good and useful work. It asks from his superior part only fair treatment, food, clothing, and shelter. It will do hard work to a wonderful extent, when well and justly treated. But when driven like a slave, overloaded, overworked, denied rest and repose, it is like all other slaves—it goes under the lash while it can, and when endurance is gone drops without any further warning. A great deal is said, and well said, about the necessity for habits of industry to be formed early in life and kept up in later age. But not half enough is said about forming habits of judicious repose, to recuperate the exhausted energies of mind and body. I do not prescribe idleness in the usual sense of that word, but a rest which is not broken by apprehension or fear; a break in the rush, a pause to gather up more strength and vigor, to repair losses of vitality, and to take time for the work ahead. When a man or woman is so trained as to be able, in brief, voluntary breathing spells, to throw off care and thought, then is the surest foundation of health and strength laid. Work will be better done, for energies so refreshed will not be jaded and spent; minds will not be fatigued beyond control; bodies will not be enfeebled. Those arch-calamities of modern life, insanity and decay, will not follow so soon on success, for they are, after all, but the judgment and sentence of Nature for flagrant disobedience to her divinely established laws. How to rest, equally with how to work, is the real secret of all mental and bodily vigor—the source of the longest continued and highest power."

CORRESPONDENCE.

THE DETERMINATION OF SEX.

To the Editor of THE MEDICAL AGE:

Now that one Dr. Schenk, a German physician, claims to have discovered and matured a plan by which a married pair can determine beforehand what shall be the sex of their prospective offspring, it may not be out of place for an American physician to place upon record an account of his experience in the same line some forty-five years ago.

There lived in a small hamlet, which was the center of an extensive country practice, "the village blacksmith," who for several weeks had been a sufferer from acute rheumatism. The village doctor, having tried on him without benefit many of the "sure to cure" remedies then known to the profession, desired to change the treatment, and put his patient on such remedies as would probably give new vigor and energy to his system. To this end he put the patient on an "emulsion of cod-liver oil," and awaited results. He soon began to grow stronger, and the rheumatism symptoms began to subside, so that before the second bottle was finished he reported himself as cured. Soon after this his wife, to whom he had been married more than five years, found herself pregnant for the first time. This condition of things, so unexpected, gave the doctor an idea that might be put to use at some future time.

A few years later this same physician, having made for himself a home in the village of Plattsburg, N. Y., and there entered upon the practice of his profession, was called upon by a farmer couple, who stated that for some, to them unknown, reason their union had been fruitless, though they had seen more than ten years of wedded life, and asked if the doctor could help them out or tell them what was the trouble.

In reply the doctor said, "Come up to my office and let us have a talk together. I think I can put you on a course of treatment that will bring you a boy baby, perhaps inside of twelve months."

Having inquired into their history and the manner of their lives, the doctor informed them that if they would follow his instructions to the letter and take medicines as directed he felt sure that the happiest results would follow.

Some twelve months after this, at the time of the county fair of the Agricultural Society, as the doctor entered Floral Hall, he saw two ladies approaching him, one carrying an infant in her arms. As she

came near she exclaimed, "Well, doctor, here's your boy!" The smiling mother then came forward and gave the doctor's hand a hearty shake.

Some two or three years later the same doctor, being at a house on the borders of the village, was thus addressed by a childless woman: "See here, doctor! there's my sister in the next house having babies every year or two, while I have none, and she is not any healthier than I am."

"Well," says the doctor, "that's a mistake; you can have children if you do right and live properly—and I can tell you how to do it."

Turning to her husband the woman exclaimed, "Joe! do you hear what the doctor says?"

Thereupon they went to the doctor's office, and got instructions and medicines such as he had prescribed before with the happiest results. In a short time the woman became pregnant, and a full year had hardly passed before she gave birth to a hardy boy.

Calling to mind these cases in actual practice in my own field of labor, I think I must send that German doctor to a seat in the rear.

MEDICUS.

A THESIS on the subject of frozen meat has been presented to the Faculty of Medicine of Lyons by M. Henry Viry, a pupil of the School of Military Hygiene. After pointing out the advantages of frozen meat, M. Viry concludes by stating that its supply in peace permits, first, of certainty in the examination of living animals for utilization and the easy supervision of the meat obtained, thanks to the installation of slaughter-houses and military freezing manufactories; secondly, the distribution in all garrisons of a food of known quality and certain innocuousness; and thirdly, economy realized at the profit of the general food supply of the soldier. M. Viry says that in time of war and in case of siege frozen meat has also advantages from a hygienic point of view.—*British Medical Journal.*

DUKE CARL OF BAVARIA, the famous oculist, has just been appointed an honorary member of the St. Petersburg Academy of Medicine. His Highness, who has just celebrated his sixtieth birthday, is at present in Munich. His brother, Prince Ludwig Ferdinand, who is also a medical doctor, has just been promoted to the rank of general of cavalry. He, however, only saw active service in the rank of lieutenant, while his brother, Duke Carl, commanded his wing of a cavalry regiment as major. Prince Ludwig Ferdinand receives patients in his palace in Munich, and is a visiting physician of the University clinique.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

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EDITORIAL ARTICLES.

FOREIGN BODIES IN APPENDICITIS.

The fluctuations of medical opinion are not inappropriately exemplified in the notions which have prevailed at various times regarding the rôle played by foreign bodies in the etiology of appendicitis. From being at one time deemed the sole cause of appendicular inflammation, they have come for all practical purposes to be considered as playing no part at all, many writers going so far as to assert that foreign bodies are never the cause of appendicitis.

The suggestion that a pin had been the cause of appendicular abscess recently led Dr. James F. Mitchell, of the Johns Hopkins Hospital, to make an inquiry as to foreign bodies in general as a cause of appendicitis, and his researches have elicited some interesting facts.

Dr. Mitchell collected the data of 1400 cases from various sources, and finds that in these about seven per cent were cases in which true foreign bodies entered into the causation of the disease, and that about forty-five per cent out of these cases were due to fecal concretions. There is doubtless some unreliability about these reports, as their collator admits. It is doubtful if in 1400 cases seven per cent of true foreign bodies could ordinarily be found. In 250 cases of appendicitis at Johns Hopkins Hospital, only one foreign body was found, a segment of tapeworm.

While the percentage of foreign bodies must be accepted with reservation, it is interesting to note the objects which have actually been found in the appendix, such as shot, pins, worms, gall stones, a tooth, and a piece of bone. Fenger reported a case of two grape seeds. Osler reported foreign bodies twice—in one instance five apple pips, and in another nine snipe shot. Frequent cases of gallstones have been cited. The most common class of foreign bodies, however, are pointed bodies. It is supposed that these become engaged in the cæcal opening of the appendix more readily than any other foreign body. Conspicuous among these pointed bodies are

pins. Roswell Park and McBurney had each two cases, and after a careful search Dr. Mitchell records twenty-eight other cases in which a pin had been found to perforate the cæcun. A curious feature of these cases was that in no instance was there any knowledge of swallowing a pin. Many interesting cases are recorded of lumbricoid worms entering the vermiform appendix. The readers of this journal may recall the report of a case in which a portion of a clinical thermometer was found in the appendix.

Among the conclusions drawn from Dr. Mitchell's statistics would be one that foreign bodies of light weight, like grape seeds and cherry stones, which are popularly assigned as the cause of appendicitis, are in reality exceedingly exceptional causes, and it is only occasionally that the appendix acts as a trap for pointed bodies and for small heavy objects like shot or bullets.

EDITORIAL NOTES.

Medicine and Caste

Lord Curzon, the Viceroy of India, has made a happy speech on the influence of medical science in breaking down the unhappy barriers erected by caste. He said: "If we had come back to you from the West with our medicine in our hand, and with that alone, we should have been justified in our return. For what is this medical science we bring you? It is no mere collection of pragmatical experimental rules. It is built on the bed-rock of pure, irrefutable science; it is a boon which is offered to all, rich and poor, Hindu and Mohammedan, woman and man. It lifts the *purdah* without irreverence. So far as I know, it is the only dissolvent which breaks down the barriers of caste without sacrilege. Medical science, indeed, is the most cosmopolitan of all sciences, because it embraces in its merciful appeal every suffering human being in the world."

Schlatter's Case of Stomach Extirpation.

The death of Schlatter's patient from carcinomatous metastasis fourteen months after the operation for extirpation of the stomach gives an opportunity for estimating the value of surgical intervention of this radical nature. The patient evidently profited by nourishment to the extent of holding her weight and strength. She had a year's relief from the pain incident to a grave disease, and by all reasonable calculation her life was not shortened. Had the metastasis not occurred so speedily the operation would have been deemed as satisfactory as that ordinarily undertaken for uterine cancer.

ITEMS AND NOTES.

Dr. Alexander Laboulene, professor of the history of medicine in the University of Paris, died recently, aged seventy-three.

A bust of Gianbattista Morgagni has been presented to St. Thomas' Hospital, London, by a committee of physicians of Italy.

A congress of therapeutics and materia medica will be held at Paris in 1900. The committee of arrangements has already been elected.

The total number of students in the University of Moscow at the beginning of the present year was 4407. Of these, 1284 belonged to the medical faculty.

Both houses of the Legislature have passed a bill prohibiting the practice of Christian Scientists' cure in Oklahoma. The Governor, it is said, will sign the bill.

There are quite a few cases of cerebrospinal meningitis in the southwest section of Washington, D. C., and some fear is expressed that the disease may become epidemic.

A patient recently presented himself at the Ricord Hospital, Paris, with a gumma situated upon the helix of his right ear. The case excited much interest among the hospital staff.

The centenary of the establishment of the medical clinic of the University of Leipzig will shortly be celebrated. Marble statues of Professor Wunderlich and Professor E. Wagner will be erected in the gardens of St. Jacob's Hospital.

Pretty Cousin: "Your friend, Dr. Lancet, passed me down town to-day without even a bow." "He: "Oh, well, you know he's awfully absent-minded. He's so completely devoted to his surgical practice." Pretty Cousin: "But that's no reason why he should cut me."

During last year 5920 persons committed suicide in the United States, 4286 men and 1634 women. This number includes 44 doctors. With respect to the quietus selected, 2526 chose poison, 2037 preferred

firearms, 787 hanged themselves, 354 chose drowning, 26 asphyxia, and 75 died as the result of self-inflicted stabs.

THE antivaccinationists appealed to the Duke of Argyle for help in their propaganda. He replied: "I look upon the effects of vaccination as one of the great triumphs of science, and then I deplore the mania which has set in, as the result of long immunity from disease, which has led to a discreditable and stupid forgetfulness of its cause."

ACCORDING to the *Philadelphia Medical Journal*, Lord George Hamilton, the British Secretary of State for India, has publicly stated that of 21,439 men engaged in the recent northwest frontier war, 16,600 were drawn for service; of these 987 were rejected as unfit because of venereal disease, while 492 were incapacitated during the campaign for the same reason.

AT the annual collective examination held in Natal, in a paper on health and temperance the question occurred, "Write out some simple directions to be followed in cases of convulsions in infants." One answer ran thus: "Put the infant quickly into a bath of boiling water up to the neck. Put ice on its head. Then give him a mild epidemic followed by a teaspoonful of castor oil."—*The Lancet.*

ACCORDING to the *Medical Record*, on February 6 Mrs. Sarah Tefft shot herself in the region of the heart, but she did not die until February 21. At the autopsy, Coroner's Physician Riegelman, of the Borough of the Bronx, found that a 32-caliber bullet had entered the sternum at the sixth rib, and had then traversed the pleura and pericardium and a portion of the heart muscle, and had finally remained in the pericardial sac.

MISS HAMILTON, M.D., who has been for three years physician to his Highness the Ameer at Kabul, has returned to London. Alluding to her work in affording medical aid to the people, she speaks of the appalling scourge of smallpox in the country, and her efforts, with the warm support of the Ameer, to introduce vaccination. She had no "conscientious objectors" out there, where summary methods could be both effective and convincing.

A CASE of almost sudden death, due to standing in the way of the sudden escape of a large amount of Pintsch gas, occurred recently in Atlanta. Pintsch gas is that which is used in lighting the Pullman cars. A workman was attempting to open a pipe which had become stopped, when it suddenly opened, and he received the full escape.

He was rendered unconscious from the shock, and even after his return to consciousness he suffered with the most violent spasms and nausea.

A BILL has been introduced into the French Chamber of Deputies to reform medical expert evidence. According to the provisions of the bill, a list of medical experts—men only of undoubted scientific ability—shall be drawn up each year. From this list one shall be selected by the trial judge, and he shall act in conjunction with an expert whom the accused may select if he or she elect. In case the two selected cannot agree, the matter is to be decided by a committee composed of eminent scientific men.

ACCORDING to the *Philadelphia Medical Journal*, Dr. Frederick Lange, of New York City, who a few months ago presented to his alma mater, the University of Königsberg, Saxony, a completely equipped gymnasium, which, in his honor, has been called Palaestra Albertina, was notified by cable recently that Emperor William, in recognition of his services, has presented to him the Order of the Prussian Crown of the second class. This is the highest insignia of honor ever conferred upon an American citizen by the German Emperor.

PROFESSOR CZERNY, of the University of Heidelberg, had three deaths from perforation when he first began to use the Murphy button, but since he renounced using it for the large intestine, for which he does not consider it adapted, preferring sutures, he has not had a single failure in over a hundred cases. He considers tying the button tight the most important point. He has performed gastroenterostomy eighty-three times with the Murphy button, sixty-three for cancer of the pylorus, and twenty for non-cancerous stenosis; mortality, 12.5 per cent.

A FEW weeks ago Dr. J. Ford Thompson, of Washington, D. C., removed from the omentum of a child two years old a steel hat-pin eight inches long, which had been swallowed about a month before. The pin was not much corroded and was intact up to the time of its removal, except the head, which was missing. From the condition of the organs of the thorax and abdominal cavity, it appeared as if the pin, which had entered the mouth head first, penetrated the esophagus, wounded the lung, passed through the diaphragm, and entered the omentum, where it was found.

THE subject selected for discussion during the next annual meeting of the Tri-State Medical Society of Virginia and the Carolinas, to

be held during the fall of 1899, in Charleston, S. C., is "The Southern Negro," taking up the following points in connection with him: First his hereditary tendencies, as learned from his race history in America and Africa; secondly, his racial fecundity, the influence of climate, city and country life; thirdly, his race mortality, in childhood, in adult life, in city and in country; fourthly, his recent erotic tendencies, the cause, and suggestions as to prevention.

ACCORDING to the *Medical Record* the President of the English Antivaccination League has given notice that an international antivaccination congress will be held in Berlin in June. In the meantime the German league has petitioned the Reichstag for the abolition of compulsory vaccination in Germany, but fortunately has not the slightest chance of succeeding. One of the apostles of the movement has just completed a two months' tour of the United States for the purpose of conferring with the leaders of the lunacy in America. It is intended to send some American delegates to the Berlin conference.

A CORRESPONDENT of the *British Medical Journal* sent the following extract from a letter received from his brother, a medical missionary in Szechuen, one of the inland provinces of China: "I had a very distinguished patient this afternoon. She is the wife of Sai-Tai, of Tien-Tsin, in Chih-Li Province, a man who governs an area probably equal to half a dozen English counties. She brought her fee with her—a fowl, a duck, sixty eggs, two pounds of cakes, and a leg of mutton! Last time she came she brought not quite so much, but since then she has sent over eight stocks of beautiful chrysanthemums."

ACCORDING to the *Medical Record*, the Alfonso XIII. Hospital in Havana is the most important and best of the military hospitals in the city. It is also the newest, having been completed in the summer of 1896. It is constructed on the pavilion plan, and is situated on one of the highest points in Havana. The hospital has a capacity of two thousand beds. It possesses an electric lighting plant and a steam laundry capable of washing the clothes of five thousand patients. A large disinfecting apparatus of French manufacture is attached to the laundry. The cooking is done by steam. The water-supply comes from the Vento Canal, and is excellent. Each pavilion has its own cesspool, which empties into the sea. There are several other military hospitals in the city, but none is so good as this one. The San Ambrosia is built of stone, but is in one of the most unsanitary portions of the city; the Manera is built of wood, but is in a better location. Each of these has accommodations for one thousand patients.

NEW PUBLICATIONS.

NERVOUS AND MENTAL DISEASES.

"This," so the preface advises us, "is not the joint work of two writers, but each author—Dr. Church in Neurology, and Dr. Peterson in Psychiatry—has contributed to the making of a single volume what might have made a separate monograph."

It seems that this newer aspirant for favor in the neurological world illustrates the too common error of attempting to combine in one volume practical treatises on these two immense subjects. One or the other is almost sure to suffer, and in this case it seems to us that Dr. Church will easily carry off the honors. His classification and division of his subject seems simple and rational and admirable. By no means the least commendable feature of the work is the fact that Part I, of 65 pages, is entirely given up to that much-neglected subject, the Examination of Patients. The anamnesis is carefully taken up, and its importance to systematic and scientific work carefully impressed. The general physical examination, the accurate observation of muscular, trophic, electrical, and sensory conditions, are gone into in detail, speech and its abnormalities receiving appropriate notice, while the value of photography in certain cases is well suggested. The treatment of this subject is excellent.

Part II, devoted to Diseases of the Cerebral Meninges and Cranial Nerves, considers with more than usual detail the diseases of the different cranial nerves, taking up ably and successively the diseases of each nerve.

Salient chapters are those upon Diseases of the Cerebral Veins and Sinuses, the Cerebral Palsies of Children, and Lesions of Special Spinal Nerves.

The illustrations are numerous and excellent, and we find here much to commend and little to criticize. The work is distinctly helpful to both practitioner and student.

To Mental Diseases is accorded 216 pages, and here, Dr. Peterson tells us, he has endeavored to bring together such matter concerning the "definition, classification, etiology, pathology, symptomatology, and treatment of insanity as will be of actual practical value to the medical student and general practitioner." It seems to us, however, as of questionable value to either student or practitioner that nearly one-quarter of the whole space devoted to mental diseases is given over to idiocy—its definition, classification, symptomatology, diagnosis, types, etc. This seems a discussion of more value and interest to the alienist than to the student and general practitioner, one rather to be looked for in more extended special treatises, and as occupying space here out of proportion to its importance.

In the chapter on General Etiology we note the same tendency to place much stress upon, and discuss in detail, the anatomical stigmata of degeneracy—cranial, facial, palatal, and aural anomalies—which, while of undoubted importance to the alienist in his special work, seem of questionable value in a work in which all that is said of mental diseases is so much compressed. The chapter on General Symptomatology is excellent, and the General Treatment is well, if briefly, considered.

The discussion of the different forms of insanity occupies about one-third of the section, and seems concise, clear, and valuable.

Paper and print are beyond criticism, and the book comes in attractive dress. The illustrations are varied and excellent.

Nervous and Mental Diseases. By Archibald Church, M.D., Professor of Clinical Neurology and of Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School (the Chicago Medical College), Chicago; Professor of Neurology in the Chicago Policlinic; Neurologist to St. Luke's Hospital, Chicago; Consulting Neurologist to the Home for Destitute Crippled Children, Chicago, etc.; and Frederick Peterson, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York. With 305 Illustrations; pp. 843. Price, cloth, $5.00; half-morocco, $6.00. Philadelphia: W. B. Saunders, 925 Walnut Street, 1899.

THE TREATMENT OF WOUNDS.

The new edition of Dr. Pilcher's work on "The Treatment of Wounds" shows several modifications of the first edition, which was issued in 1883. At that time the methods of Lister had begun to wane, and to-day the treatment of wounds differs considerably in many important respects from those which then prevailed. Many changes have taken place, especially in firearms and the implements of war, and these have rendered a new treatment of the subject necessary. The present volume appears to embody all the modern theory and practice of the treatment of these injuries. The importance of the subject cannot be too strongly insisted upon, and every medical student should be made to believe that the treatment of wounds is undoubtedly not merely the first stone, but also the corner-stone, of surgery. The subject is admirably treated in Dr. Pilcher's work, and the text is elucidated by a large number of very interesting illustrations.

The Treatment of Wounds: Its Principles and Practice, General and Special. By Lewis Stephen Pilcher, A.M., M.D. With 142 Wood Engravings. New York: William Wood & Company, 1899.

RAILWAY SURGERY.

This work is intended as a practical handbook to show wherein the injuries ordinarily met with in railway service differ from those incident to other occupations, and to direct special lines in their diagnosis, treatment, and management. There is a large amount of suggestive matter of general importance in the book, such as matters of jurisprudence and the examination of employees. While, of course, there is much in the work which pertains to surgical science in general, there is a great deal that will be of particular interest to the surgeon interested specially in railroad accident work.

Railway Surgery. A Handbook on the Management of Injuries. By Clinton B. Herrick, M.D., Troy, N. Y. Profusely Illustrated with Numerous Original Engravings New York: William Wood & Company.

THE PRACTICE OF OBSTETRICS BY AMERICAN AUTHORS.

In accordance with the enlightened principles and underlying division of labor Messrs. Lea Brothers furnish this excellent manual of obstetrics by American authors. It is a clear and practical treatise upon the principles of obstetrics by well known teachers of the subject. The subject is divided into thirty-four sections, each of which is entrusted to one of some twenty different contributors. A special feature of this work would seem to be the excellent illustrations with which the book abounds. The work is sure to be popular with medical students, as well as being of extreme value to the practitioner.

The Practice of Obstetrics by American Authors. Edited by Charles Jewett, M.D. Illustrated with 441 Engravings, 34 of which are in Colors, and 22 Colored Plates. New York and Philadelphia: Lea Brothers & Co., 1899.

PROCEEDINGS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

The transactions of this society contain a large number of papers of more than ordinary interest, marked by a high degree of scholarship and research. The volume belongs to a higher order of literature than that to which such publications are usually assigned.

Proceedings of the American Medico-Psychological Association at the Fifty-fourth Annual Meeting, held in St. Louis, May 10-13, 1898. Published by American Medico-Psychological Association, 1898.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Employment of Saline Solutions.

At the Société de Thérapeutique (*Medical Press*, March 8, 1899) Professor Bolognesi read a paper on the above subject, which was very exhaustive. In referring to the methods employed, he said that artificial serum could be introduced into the organism by four ways—the serous, vascular, subcutaneous, and intestinal.

Intraserous injections were first proposed by Ponfick, who had remarked that the blood effused into the serous membranes was rapidly absorbed. The injections were nearly always made into the peritoneum by means of an incision made above the umbilicus, and penetrating to the linea alba; the needle was pushed as in the operation of tapping for ascites. Perforation of the intestine, which many feared, was rare, but the operation was always painful, and followed by distention of the abdomen. As the slightest failure in antiseptic precautions could produce mortal peritonitis, intraperitoneal transfusion was but little practiced.

Intravascular injections were first employed by Hueter, Roux (Lausanne), and Kummel. The vessels chosen were the veins of the bend of the elbow, or the internal saphenous vein over the ankle, which passing over the bone is more easy to discover in stout people, and whose caliber is larger than any of those at the bend of the elbow, while the introduction of air at such a distant point from the heart presented but little danger. The quantity of liquid injected varied between one and three liters, with an average of two liters, at a temperature of 86° F. The rapidity with which the injection is administered should not exceed ten minutes per liter.

Venous injections presented certain inconveniences not entirely exempt from danger. Consequently many practitioners preferred for these reasons the subcutaneous method. For inexperienced hands the venous injection was a regular operation; the veins were frequently difficult to discover; timid operators were afraid of introducing air into the veins; and in any case septic accidents might be provoked, such as phlebitis. Pozzi published one case of acute edema of the lungs as a consequence of the operation. Further, the counter-indications—cardiac lesions, and weakness of the myocardium in particular—were more frequent. Bosc, of Montpellier, preceded the

injection of the serum by drawing off a liter of blood; while Barre invented a rather complicated apparatus to combine these two operations, so that the amount of blood withdrawn was replaced by its exact equivalent of artificial serum; but there was no necessity of being so precise, as the same effect could be produced by ordinary blood-letting and the introduction of the serum subcutaneously.

The subcutaneous method is at present the most frequently employed, and answers every purpose except in urgent cases requiring the intravenous method. The region chosen should be that rich in cellular tissue, such as the axilla, the abdomen, the thigh, or the gluteal region.

In affections of the nervous system, Professor Grasset, of Montpellier, advised saline injections in apoplexy with arterial hypotension. They were proposed in contagious affections such as erysipelas, measles, scarlatina, and smallpox; while Professor Tommassi, of Palermo, in certain skin diseases derived benefit from them, especially in chronic eczema, and in lichen attended with great itching. His colleague, Barbier, obtained considerable success with the same injections in infantile cholera, and generally in all the intestinal affections of infants.

Lancereaux published remarkable effects of subcutaneous injections of a saline gelatin solution in cases of aneurisms (gelatin 1 drachm, saline solution 10 ounces) injected under the skin of the gluteal region, and renewed once or twice a week. Ten to twenty injections were generally sufficient to effect a cure.

Among the counter-indications of the treatment by saline solutions the author mentions heart affections, edema of cardiac origin, dropsies, pulmonary congestive lesions, and renal sclerosis.

Symptoms and Diagnosis of Movable Kidney.

H. B. Stehman (*American Journal of Surgery and Gynecology*, No. 8, 1899) says that the lesions that may at times be confounded with a movable kidney are a solid ovarian tumor which occupies the median line, a displaced spleen or liver, the gall-bladder, an echinococcus cyst of the liver with a pedicle, the accumulation of feces in the flexure of the colon, carcinoma, and sarcoma of the abdominal organs and omentum, not excluding the kidney itself; perinephritic abscess, growths in the abdominal wall, and appendicitis.

The writer, in considering the subject of differentiation, says that there are several anatomic and pathologic facts which, if kept in mind, will help one materially:

1. The retroperitoneal position of the kidney as compared with

the liver, spleen, gall-bladder, various cysts and growths within the abdominal cavity, which can be easily demonstrated by combining percussion with inflation of the bowel.

2. The reniform shape of the kidney in comparison with the characteristic shape and feel of the spleen, liver, gall-bladder, etc.

3. The immobility of the displaced kidney during inspiration and expiration as compared with the descent and ascent of the spleen and liver, and growths connected with them, during respiration.

4. The pulsation of the renal artery, which, if felt at all, will always be recognized as part of the pedicle, for it must be remembered that the range of motion of the kidney is determined by the vessels, nerves, and ureter.

5. The ease with which the organ can frequently be moved from place to place and restored to its normal position, in comparison with organs or growths whose positions are fixed.

6. Tenderness on pressure and the sickening sensation which is produced by compressing the organ between the two hands.

A New Operation for Hernia.

Dr. E. Lanphear (*American Journal of Surgery and Gynecology*, No. 8, 1899) outlines a new method for operating on hernia, as follows: A large flap is turned back, exposing the hernial sac and the inguinal canal in their entirety. The sac is then carefully dissected out, opened, and contents reduced. At this stage the opening into the abdomen is closed with gauze and the spermatic cord and testicle lifted out of their natural position, and enveloped in iodoform gauze. From the hernial sac (parietal peritoneum) there is now made a pouch, or artificial tunica vaginalis testis, into which the testicle and cord are passed and enclosed with catgut sutures in such a way that not too much pressure is possible upon the cord; the whole is then pushed into the abdominal cavity and anchored by a few catgut sutures. The cut in the peritoneum is next closed; next the opening into the scrotum sutured; then each muscular layer of the abdominal wall carefully sutured, completely obliterating the canal—just as is done in operating for inguinal hernia in the female.

That the ultimate fate of the buried testicle is atrophy, the writer says he cannot dispute, as no opportunity has yet presented for post-mortem examination; that it is possible cannot be denied. From a surgical standpoint, the chief objection to this operation is that a suppurative orchitis or epididymitis might necessitate abdominal section; but suppurative inflammation of these structures is so comparatively rare that this danger can scarcely outweigh the advantages to be gained. Thus far only the most gratifying results have been noted.

A Case of Thoracic Aortic Aneurism Treated by the Introduction of Silver Wire with Electricity.

E. S. Carson, in the *Philadelphia Medical Journal* of March 4, 1899, reports a case which was treated by the introduction of silver wire with electricity, and from the clinical history and necropsy he is led to the following conclusions:

1. Quick coagulation of blood follows after introducing the current of electricity.

2. Improvement in the left radial pulse was due to electrical stimulation.

3. Relief of dyspnea and cough for the first few hours follows treatment.

4. But little shock or depression to the patient results from this method.

5. Slight hemorrhages attending or following the operation are probably due to old clots.

6. Unfamiliarity with the power of the cells of the battery entails lack of knowledge as to the milliamperage in use.

7. The constriction of the sac remarked upon prevented the descent of the wire, so that only the upper part of the clot was affected, and hence results were incomplete.

8. Owing to the advanced state of the lesion it is doubtful whether a cure could have been effected under any conditions.

Chronic Appendicitis.

After reviewing the etiology, pathology, symptoms, and diagnosis of chronic appendicitis, A. E. Benjamin (*Northwestern Lancet*, March 15, 1899) says he believes from witnessing considerable work of the best men in the United States, and from personal experience in treating these cases, the following to be true:

1. Nearly all primary attacks of appendicitis leave the mucous membrane in a damaged condition.

2. Each succeeding attack increases the pathological change in and around the appendix, rendering an operation more dangerous.

3. A person having one attack is seldom safe away from a surgeon.

4. A state of fear of another attack exists in such an individual.

5. Valuable time is lost and much suffering experienced during each attack.

6. The mortality is extremely low (almost *nil*) with experienced and careful surgeons operating in the interim.

The author therefore concludes that chronic appendicitis is a surgical disease; that practically it is as frequent in the female as in the

male; that it is wrong to discharge a patient treated by medicine as cured; that the rational plan with few exceptions is to remove the appendix when once inflamed, as it offers the only reasonable hope of safety and return to complete health.

Rhythmic Shaking of the Head in Aneurism of the Aortic Arch.

Before the Italian Society of Internal Medicine Dr. Bruschini (*Monatsschrift für Ohrenheilkunde*, No. 1, 1899) reported at length upon the observance of this physical sign. Coop had already remarked that with every systole of the heart, the head of the patient, in cases of aneurism of the aortic arch, was bent slightly forward. More recently Bruschini had observed six cases in which this phenomenon was present. The shaking head in each was independent of any shaking of the larynx and trachea, and arose directly from the aneurism. This symptom is of value, not only for the diagnosis but for the prognosis as well. These rhythmic movements of the head cease about twenty-four hours before the aneurism ruptures; they are diminished and may quite vanish if clots form in the aneurism.

Early Diagnosis of Urethral Stricture.

J. H. Dowd (*Philadelphia Medical Journal*, No. 10, 1899) sums up his article on the early diagnosis of stricture, as follows:

1. Text-book symptoms of stricture are misleading and do not occur until contraction has existed for years.

2. Symptoms or no symptoms, shreds in a clear or semiclear urine indicate urethral contraction.

3. The early discovery (three or four months from time of infection) of these shreds may be followed by the entire obliteration of their cause.

4. Formaldehyde irrigation preceding and zinc solution following a sound is advisable in every case, and may sometimes save a life.

MEDICINE.

Aboriginal Superstitions About Bones.

A very interesting archeological site in Mexico (*Popular Science Monthly*), visited by Carl Lumholtz and Ales Hedlicka in the fall of 1896, is near Zacapu, in the State of Michoacan. The region is marked by many stone mounds on or near the edge of the old flow of lava, extending for several miles; and directly above the village

stands a large stone fortress, called El Palacio. Excavating near this fortress, Mr. Lumholtz unearthed several skeletons, which had been buried without any order, and accompanied by "remarkably few objects," but some of these were well worthy of study. The most curious things found were some bones, strangely marked with grooves across them, exhibiting a little variety in arrangement, but all similarly executed, and evidently after a carefully devised system. This feature is so far unique in archeology, and its purpose can as yet be only a matter of conjecture. Two ways are proposed by the author of explaining it. The marking may have been an operation undertaken for the purpose of despatching the dead. Mr. Lumholtz is knowing to a belief among the tribes of Mexico that the dead are troublesome to the survivors for at least one year, and certain ceremonies and feasts in regard to them have to be observed in order to prevent them from doing harm, and to drive them away. The Tarahumares guard their beer against them, and others provide a special altar with food for the dead on it at their rain-making feasts, else the spirits would work some mischief. Among many tribes an offering is made to the dead, before drinking brandy, of a few drops of the liquor. A relation is also supposed to exist between disease and pain and the bones of the deceased person. A whole class of diseases are supposed to have their seat in the bones or the marrow of them. If the disease does not yield to the shaman's efforts, and causes death, the Indians think that the pain will continue after death and vex the ghost, making him malignant and troublesome. Therefore the pain must be conquered and driven away from the bones and the marrow. Hence the markings may have been made in order to sever all connection between the spirit and his former life, and from the disease that caused his death. The other explanation is that the bones were taken from slain enemies for other purposes than as mere trophies. Personal or bodily relics are supposed to possess some of the qualities of the deceased, and to give power. This view is supported by some observations of Mr. Cushing relative to Zuni customs; and the author is inclined to favor it rather than the other.

Urethral Ointments and Suppositories.

Dr. Janet (*Journal of Cutaneous and Genito-Urinary Diseases*, March, 1899), at the recent meeting of the French Association of Genito-Urinary Surgeons, said that these may constitute a means of treatment, gentle and active, which should not be neglected. They are less irritating in sensitive cases, and penetrate more intimately into the folds and lacunæ of the urethra and remain for a long period in

contact with the urethral walls. They are useful in acute and chronic cases.

As a lubricant for catheters and also for dilating sounds Janet uses lanolin 20 grammes, oil of vaselin 10 grammes, borate of sodium 0.60 gramme. In urethritis he has adopted the channeled catheters of Casper, and uses three models—one straight, one with a slight curve, and one with the benique curve—and covers them with the following ointment: lanolin, 17.50 grammes; glycerin, 7.50 grammes; borate of soda, 0.60 gramme; oxide of zinc, 2 grammes—in simple urethritis. In chronic urethritis he adds to the same excipient protargol, 2 to 5 per cent; nitrate of silver, 1 to 2 per cent; salicylic acid, 0.50 to 1 per cent.

For suppositories Janet uses small cones of cacao butter and incorporates iodoform up to ¼ per cent; protargol, 2 to 5 per cent; nitrate of silver, 1 per cent. These cones fit the filiform extremity of the exploratory guide of Malley and may be carried to the bulb. For the posterior urethra they are fitted into an instillator of large caliber and are pushed out with a rubber stylet after the olive tip has entered the posterior urethra.

Hair dyes and Their Dangers.

M. Tissot (*Indian Medical Record*) points out in the first place that dyes have been in common use from the most ancient times, especially amongst women, for the purpose of modifying the color of the hair.

The washes and pomades in use are very numerous; as a basis they have some of the following drugs: Caustic potash, nitrate of silver, nitrate of mercury, nitrate of bismuth, acetate of copper or of lead, nitric, sulphuric, sulphydric acid, and hydrosulphate of soda.

The accidents caused by hair-dyes, says the writer, vary with the substances employed. All the preparations in use up to the present are injurious either in themselves, or through the added substance which transforms the base of the tincture or mordant so as to make it act upon the hair, or through the products involved, which are very active at the time of evolution.

The injurious effects of hair-dyes are of two kinds—the one inflammatory, the other poisonous. The favorite seat of inflammatory lesions is primarily the edges of the hair, the upper lip, the forehead, the neck, the ears, the face, and sometimes the upper extremities; sometimes they may be general. The toxic action on the kidney betrays itself by desquamation of the epithelium. All these injurious effects are much more common than generally supposed. A large

number of affections of the eyes, neuralgias, migraines, and cases of pseudomeningitis are due to this cause alone.

Hair-dyes with a basis of lead have often caused erroneous diagnoses.

Certain Test of Death.

Dr. Chalmers Prentice (*Public Health Journal*, March, 1899), who has been practicing for many years in Chicago as an oculist, has asserted that he can infallibly tell whether death is present or not by simply noting the appearance of the veins and arteries of the eye. His experiments in this line began many years ago, and he has never known his simple test to fail. In cases of suspended animation where others have pronounced death his test has proved that life still existed. Dr. Prentice has observed that during life, when the back portion of the eye is being looked at with an ophthalmoscope, the veins can be clearly distinguished from the arteries. The former, containing venous blood, richly charged with carbonic acid gas, appear of a dark, blackish color, while the arteries, containing blood fresh from the heart, appear a bright crimson. The difference between the two shades of color is so clearly marked that mistake is impossible, and the retina appears as if made up of two separate colors. The arteries and veins, however, are not situated in the retina, but directly behind it, in that coat of the eyeball known as the choroid. Even in the case of the blind this color distinction is present unless a cataract exists, when the use of an ophthalmoscope would be impossible. Dr. Prentice has found that in death the shade distinction entirely disappears, and the blood in both arteries and veins is transformed into a pinkish color of uniform shade.

Diet and Alcohol in the Treatment of Rheumatoid Arthritis and Gout.

Wm. Ewart (*Medical Press*, March 8, 1899), in the course of his remarks before the London Clinical Society, said: "The rheumatoid patient needs, above all, to be fed, and wine suits him well; but if he should turn gouty we cannot disregard his gout. It is preeminently in this connection that the practical purpose of this discussion is revealed. How to diet the patient and whether or not to allow him alcoholic stimulation are points not to be safely decided, except on the strength of an accurate diagnosis not only of the general character of the case, but of its special phase. In doubtful cases there is probably more rheumatoid arthritis about the patient than gout, and I am in favor of the policy of running the risk of a slight gouty

exacerbation rather than of incurring the reproach of intensifying the depression and debility inseparable from the rheumatoid state. The gouty element, if present, may however restrict the choice of stimulants to those more suited to gout; whereas in uncomplicated rheumatoid arthritis, particularly that of the young, the prevailing anemia calls for a supply of the red wines. In both cases the delicacy of the digestion has always to be borne in mind, and it is equally essential that the diet should be easily digestible, and that it should be sufficiently varied and nutritious."

Tuberculosis in the Colored Race.

J. A. Faison, in a communication to the *Medical Record* of March 11, 1899, says that an experience of twelve years has led him to the following conclusions on this subject:

1. The antecedent tuberculous diathesis is not so characteristic as in the Caucasian.

2. The susceptible period for the negro is from eighteen to twenty-five years of age.

3. Tuberculous lymphadenitis in children and young adults is not increasing in equal ratio with phthisis pulmonalis.

4. The dark members of the race are as liable to tuberculosis as mulattoes.

5. Phthisis runs a more rapid course in the negro than in the Caucasian, conditions being similar.

6. Hereditary predisposition does not play so important a part with the negro as with whites.

7. Scrofula following the law of atavism has not been observed.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Blood Observations in Malaria.

Mariottini (*Indian Medical Record*, Feb. 8, 1899) communicated to the Medico-Surgical Society of Pavia some observations on an endemic of malaria which attacked twenty-five children in Pavia and the immediate neighborhood.

Examination of the blood showed in all the twenty-five cases the ameba form of the malaria parasite in the red blood-corpuscles, which, according to Golgi, is characteristic of the tertian type.

In cases where the type of fever was quotidian a double genera-

tion of the parasite was found. One generation caused the fever on the day of observation, and the other would cause it on the following day.

Only in one out of the twenty-five cases was the semilunar form noticed in addition to the tertian form. This was a child, nine years of age, who for a long time had suffered from fever of an irregular type, which quinine had failed to cure. Mariottini ordered six grains daily, and some days later examination of the blood gave negative results, and apparently the attacks of fever had quite ceased. Nevertheless, after a longer time the mother brought the child back with fever, and the examination of the blood showed the presence in large numbers of a double generation of amebæ.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Lupus Erythematosus.

From our present knowledge, lupus erythematosus, says Dr. A. R. Robinson in the *Journal of Cutaneous and Genito-Urinary Diseases* for September, 1898, cannot be a local disease caused by a multitude of agents, nor can it be produced by toxins from other parts of the body; it is more probably a chronic infective process, with organisms at the seat of the lesion. Many authorities believe the process begins in the blood-vessels. The supposition that the disease has any connection with the sebaceous glands or with the hair follicles is not borne out by experience, and, moreover, there is no hypersecretion of the sebaceous or sweat glands. Leloir states that the epidermis is only secondarily affected. There is a diffuse infiltration in the derma, especially in the upper third. The infiltration is composed of a large number of embryonic cells, which are found along the blood-vessels, and in a diffused form in the derma. The cells are subject to degeneration in a haphazard way. Sometimes new blood-vessels form. The changes in the epidermis are always secondary.

Picric Acid in Eczema.

F. Radaeli (*La Settimana Medica*, Feb. 18, 1899; *British Medical Journal*, March, 1899) reports the results of a trial of picric acid in different forms of eczema in Pellizzari's clinic in Florence. The affected part was first freed from scabs, etc., the hair cut as short as possible, and the whole region thoroughly washed with boracic acid

solution. When the part had been dried, applications of a saturated watery solution of picric acid were made with pledgets of cotton; then a compress wrung out of the same solution was applied, and over this was placed a layer of cotton-wool, the thickness of which was proportionate to the abundance of the secretion. The whole was kept in place by a bandage. The dressing was left on for one or two days. The author points out the special convenience of the picric acid dressing in acute eczemas where there is much "weeping," as it does not require frequent changing. On the other hand, the remedy has the disadvantage that it causes great smarting in the parts to which it is applied. This, however, ceases completely in ten or fifteen minutes, giving place to a sense of relief which is mainly due to the cessation of itching. Details are given of a number of cases (acute eczema of scalp, chronic eczema, diffuse acute eczema, eczema impetiginoides of the face, "varicelloid" eczema, etc.), in all of which the results of the picric acid treatment were satisfactory.

The Treatment of Pruritus in Diabetes.

Saundby, in *Renal and Urinary Diseases*, says that this condition may be treated by carefully cleansing after micturition with a sponge dipped in some antiseptic fluid. Lawson Tait speaks very favorably of the use of a lotion containing sodium hyposulphite, an ounce to a quart of water, and of an ointment containing ten grains of potassium sulphuret to the ounce, combined with the use of opium. A warm, freshly-made saturated solution of boracic acid may be used with confidence that it will give relief, and after carefully drying the parts zinc ointment should be applied freely; but it is right to say that the condition, possibly from want of care on the part of the patient, is sometimes very intractable. Routh recommends the following remedies: Put a teaspoonful of borax into a pint bottle of hot water, and five drops of oil of peppermint, and shake well. Bathe the affected parts freely with a soft sponge. If rawness or eczema be present, apply olive oil, to which iodoform has been added in the proportion of five grains to the ounce.—*Philadelphia Medical Journal*, March 4, 1899.

Moles.

Dr. T. C. Gilchrist, in the *Journal of Cutaneous and Genito-Urinary Diseases* for September, 1898, says that, according to the leading pathologists, moles are incomplete sarcomata—growths from the walls of either the lymphatics or the blood-vessels. Unna stands alone in saying that the structure of a mole is derived from the epidermis, and, therefore, is of epithelial origin. Dr. Gilchrist went on to say that he

had excised a pigmented mole from the abdomen of a child, and several from adults. The mole from the child showed nests of cells in the epidermis. His own observations certainly confirmed this view of Unna. Since, therefore, the cells of the tissue forming the mole are of epidermal origin, a malignant growth in a mole is undoubtedly a carcinoma and not a sarcoma.

Toxicity of Urine in Skin Affections.

Colombina, in *La Presse Médicale* of January 25, 1899, states that the toxicity of the urine is diminished by more than half in eczema rubrum; evidently the toxins are eliminated by the skin in these cases, which explains the dangers of a sudden cure of an eczema of this kind. He also suggests that the eczema may be due to the non-elimination of the toxins by the kidneys. In other cutaneous affections suppressing the functions of the skin, the toxicity of the urine is increased. In both cases the urine returns to normal after recovery from the dermatosis.—*Journal of the American Medical Association*, Feb. 25, 1899.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Toxic Agents and Degeneracy.

In the *Quarterly Journal of Inebriety* for January, 1899, Dr. Eugene S. Talbot discusses these agents and their influence on degeneracy, asserting that the ultimate effect of these various agents is very closely similar to that of the acute and chronic contagions and infections. To tobacco he assigns first place in the list, making alcohol and opium close contenders for the second place; but he recognizes that much statistical matter concerning the effect of alcohol has been published which is of very doubtful value.

The deteriorating effects of alcohol on the ovaries and testes save us from a heredity which otherwise would be far greater than it is. "It causes changes in the peripheral nerves which in the offspring find expression in spinal cord and brain disorder through the extension of the morbid process."

Posterity is not so well protected from the entailments of opium. The new-born children of opium-eating mothers must be nourished by the milk of an opium-eater or be given opium in some form, and the children who survive are liable to convulsions. "Opium, when

smoked, stimulates the reproductive apparatus, and thus would greatly increase the number of degenerates due to this habit but for the defects due to the inheritance of the habit and their consequences."

The typical effects are usually shown only after long use of tobacco — twenty years or more. Enteric disturbances of various kinds are not uncommon, menstrual disturbance in women, and "in female cigarmakers abortion and pluriparity are frequent." Variations of the pulse, faintness, precordial anxiety, sclerosis of the coronary arteries, and even left ventricular hypertrophy, are among the grave charges laid at the door of tobacco, while statistics from the female employees of Spanish, French, Cuban, and American tobacco factories go to show that the maternal tobacco habit is the cause of frequent miscarriage, defective children, and of infantile convulsions.

Professional tea-tasters, tea-tipplers, excessive users of coffee, all contribute to a degenerated progeny, while coca habitués, workers in lead and phosphorus, brass-workers, and those employed in occupations using mercury, are all more exposed than is commonly thought to influences from which an increase in degeneracy is almost sure to result.

Alleged Opium Specifics.

The *Quarterly Journal of Inebriety* has these very sensible words to say concerning the numerous humbugs vaunted as specifics for the cure of the opium habit: "The opium specific discoverers who claim such marvelous results, and offer to verify their statements, fail to realize that a great army of scientific workers are waiting to test their work, and are ready to welcome with open arms any new discovery and discoverer. If any man has found a drug or combination of drugs that in any way is a specific, he can have no fear of his facts and reputation. They are assured beyond all question. New truths cannot be hid in a bushel, or stolen from the finder. The scientific public are not selfish nor mercenary, and concealment and mystery is fatal to the growth of any new truth. If the discoverer is afraid of publicity of his new facts, it is a fatal admission that they are not realities, and that they cannot stand the test of examination, but must seek concealment and mystery to live."

Acute Gonorrheal Meningitis.

Verily the consequences of gonorrhea are multiform. A recent journal reports a case of pleuritis gonorrheica, and the *Journal of the American Medical Association* of January 28, 1899, contains a report by J. S. Wooten, B.Sc., M.D., of a case of acute gonorrheal meningitis.

The patient was thirty-six years of age, weighed 175 pounds, and was in perfect health up to the contraction of an acute gonorrhea, the proper treatment of which was entirely neglected until he sought medical advice with a well-developed gonocystitis. Improvement was marked and satisfactory after a few days' treatment. The patient was not seen for three days, and the doctor, when called, found that he had had a rigor, temperature was 103°, skin bathed in perspiration, pulse full, quick, and bounding. He was hilarious, excited, and talked at random; complained of headache, vertigo, and nausea. He was fairly rational when his attention was attracted, but this gave place to an increasing drowsiness, which deepened into coma and death at the end of about ten days. Toward the close of the period a gonorrheal arthritis developed in the left elbow and right knee-joint. Marked trismus, deafness, hiccoughs, and muttering delirium preceded the end, the meningitis having lasted twenty-one days.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Chronic Catarrh of the Posterior Pharyngeal Wall and its Treatment by Curettage.

Dr. A. Malherbe (*Monatsschrift für Ohrenheilkunde*, No. 1, 1899) says that this affection consists of a hypertrophy of the mucous membrane with changes in the structure and physiology of the glands. These latter atrophy, while the lymphoid portions undergo proliferation and hypertrophy, especially in the region of the pharyngeal tonsil. This hypertrophy presents the appearance of an indurated mass and has the form of a pillow with crypts and grooves on the surface. The mucus secreted is glutinous and thick. Certain glands may be occluded and give rise to the formation of true cysts. The symptoms of this affection are characterized by thick mucous or mucopurulent discharge which annoys the patient the same as a foreign body might, causing hawking and coughing in an effort to clear the respiratory tract. A tendency to vomit, coughing, and true pharyngeal spasm regularly accompany such a condition. "They cough, so to speak, through the nose, and blow the nose into the tongue." The usual sequelæ are disturbances of smell, headache, impairment of the voice, deafness, mouth-breathing, and various other afflictions. Malherbe uses vigorous curettage of the nasopharynx under ethyl bromide anesthesia for the removal of the difficulty. In seven cases which he reported the procedure was successful in affording relief.

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ORIGINAL CONTRIBUTIONS.

AN ADDRESS TO GRADUATES.*

BY DONALD MACLEAN, M.D., LL.D., DETROIT, MICH.

The invitation to take part in the business of this occasion, coming as it did from your honored Principal and Faculty, was accepted by me as a command from a superior officer, and I felt that I had no choice but to obey. I need hardly say that to address suitable words of advice, of encouragement, possibly of warning, to you seemed a great responsibility for me to undertake, and the thought of it gave me pause.

In accepting the responsible and honorable duties of the present occasion I promptly arrived at one important resolution, that for once the speaker and his audience should engage in a mutual aid proposition. Past experiences impressed me hopefully as to this plan. It appeared to me that an individual of my intimate association as companion, friend, teacher, and ally of medical students ought surely to be able by looking directly into the faces of medical graduates to obtain all of suggestion and of inspiration that could be requisite for such an occasion. Consequently I beg of you to regard the responsibility of the business on hand as a divided responsibility, and that you, my young friends, have to carry your fair share of it. I would feel perfectly at ease if I could feel as much confidence in myself as I do in you as to the discharge of our respective parts in the functions of this copartnership. For your comfort and encouragement, let me say here that I will try to be brief, so that the strain upon your energies will not be unduly severe.

The position which you occupy to-day is one which without ques-

*Delivered before the Medical Convocation of Queen's University, Kingston.

tion commands the most lively interest of all your friends and the public generally; while for each one of you personally it is really a momentous occasion. For the individual who could with a light and indifferent heart take his departure from these halls and saunter recklessly forth into the new life and the new duties which await him, feeling no inspiring sense of the responsibilities and opportunities of his high calling, no words could justify and fully express our feelings of apprehension and of pity. For such a one might we not, in all truth and sincerity, say 'twere better for that man that he had never been born into the profession? Gentlemen, in this your time of rejoicing, and your hour of victory, I implore of you not to forget or lose sight of the essential solemnity of the occasion. It is difficult, I know, for you to fully appreciate how much of your own and other people's happiness and welfare depends upon the initial steps you take; much, in fact almost everything, will depend upon the resolutions which you now make, the plans which you now map out for yourselves, and the determination, courage, and perseverance with which you stand by the decisions of this day, when, crowned by the loving benediction of your teachers, your alma mater, and all your friends, you start out on the arduous, responsible, and noble life of the medical practitioner, than which no life is more honorable or more beneficent or more godlike, if consistently lived through in the spirit of humanity and scientific honesty which is presupposed in the ideals of its best and truest representatives.

It is thirty-four years since your humble servant first joined with Dr. Fowler, Dr. Sullivan, and other honored members of this University in saying *benedicite* to a graduating class, and between that time and the present it has fallen to my lot to enjoy the same privilege in connection with a long line of graduates of other medical schools. Many years of intimate association with medical students and young doctors have had the effect of making it second nature for me to feel the tenderest interest in the welfare of this hardworking, struggling class of aspirants to fame and fortune. You will, I trust, believe me when I look you, my young brethren, in the face and say to you that my most earnest wish on this memorable occasion is to offer you the best advice I have to give. The cynic and the skeptical pessimist habitually sneer at the making of good resolutions, ranking them with pie-crust and promises made to be broken. "Get thee behind me, Satan!" Defy all such evil prognostications, my young friends. Make you good resolutions on this the great and notable day of your life, and stand by them to the very best of your ability. That you may prove triumphant, that you may persevere to the end, that you may ultimately earn the laurel and the crown of victory, is assuredly

the most earnest desire of all who know and feel interested in you, and none more so than the teachers who have already exhibited their warm regard for your best interests, and who to-day stand by with warm heart and cordial hand to welcome you to the ranks of the noble profession which they expect you to adorn. The weather-beaten, experienced mariner who should declare to the fresh young sailor-boy that the sea is always calm, the winds always fair, and the skies ever bright and pleasant, and that, in short, he has nothing to apprehend, would surely be an unworthy monitor, an unreliable and cruel pilot! Not less so would be the wayworn and careworn member of the medical profession who, standing where I stand to-day, should presume to say to you that there is nothing before you but plain sailing, prosperity, ease, comfort, and success. I know better. The truth is that you are starting out upon a stormy voyage. You will meet with opposing winds. You will ship heavy seas. You will face many dangers. God grant that you may weather all storms, steer clear of all rocks and lee shores, and sail at last triumphantly into the harbor of "peace with honor." Your success, in the highest sense of the term, is earnestly and lovingly desired by many persons besides those here present—in fact, you are compassed about by a great cloud of witnesses, all inspired with the loftiest aspirations for your future happiness. The world moves, and every day and hour brings profound changes in every direction, and in none more so than in the sphere of medicine. This, I think, may safely be said, that never has there been a time, never has there been a condition of things, when to the youthful graduate, the genuine, enthusiastic devotee of the science and art of medicine, the outlook for the future was so inspiring.

Don't permit yourself to be oppressed or intimidated by the pessimistic asseveration that the profession is overcrowded and that there is no room for you. If any such phantom possesses for you a real existence, a "too, too solid flesh," it is simply because you have mistaken your profession and because you are in reality unfit and unworthy to buckle on and to wear the armor, or to march in the ranks of that grand army which from Hippocrates to Lister has kept abreast of every scientific advance which has contributed to the relief, the saving, and the elevation of mankind. Therefore to each one of you I say, "Know thyself" in this particular regard. Resolve, once and for all, whether you are prepared to put your hand to the plow, and, having done so, to refrain from the weakness of looking back. If by any chance you have real reason to suspect that your choice of life-work has been a mistake on your part, it is not yet too late to beat an honorable retreat. You are young enough to adopt a different field of activity. One of the most respected and admired pupils and

assistants in the long line who have been associated with me, after completing his curriculum and graduating with the utmost satisfaction to all concerned, the day after accepting his diploma and title of doctor, walked with trembling lip and pale face into the presence of his nearest and dearest friend and patron, and made a full, free, and honest confession. He said: "In deference to the wishes of yourself and my family I have gone through my medical course and have graduated without disgrace to anybody. Now, I come to tell you that it is not in my nature to pursue this vocation, and I find myself absolutely compelled to seek some other line of life." In such a case some people might exclaim "Coward," some might say "Deserter," some "Fool." I say, and I hope you will agree with me, that he was a moral hero, true to himself, and true to the profession from which he retired with all the honors of war. He has since, I am happy to say, attained distinguished success in business pursuits. Oliver Goldsmith graduated as a doctor, and you will search the archives of medical literature in vain for any memento of his genius. But he wrote "The Vicar of Wakefield," "The Deserted Village," and "She Stoops to Conquer." I therefore ask you to unite with me in granting him, to the extent of our power, extreme unction and a free pardon so far as our profession is concerned.

My next suggestion to you is to resolve that, having deliberately and conclusively elected your profession, you will despise everything like indifference or lukewarmness in the performance of the duties which pertain thereto. It would surely be difficult to conceive of a more pitiable or more abject creature than the so-called doctor who goes along day after day, and year after year, peddling out for money the meager, shop-worn lessons and technical therapeutical maneuvers garnered up for selfish ends during the few years of his college life. The trade of the pawnbroker and the usurer is regal in comparison! Medicine is a boundless science and a beautiful art, essentially grand and inspiring. The individual who is incapable of seeing it in that light is as unfit and unworthy to enlist in its ranks as a coward, a cripple, or an imbecile would be to march with the Gordon Highlanders or charge with the Light Brigade. On the other hand, the young doctor who firmly resolves to appropriate to himself, for the benefit of his fellow men, all the wondrous teachings of modern medical science, and at the same time, to the best of his ability, to keep pace with its ever-increasing developments, that young man is mapping out for himself a journey through life every step of which is strewn with flowers of surpassing beauty and never-ending spiritual delight. Wealth, as the world regards it, may escape his grasp, filthy lucre may drop into other and less worthy hands, ambitions may fail him, and he may live and die

poor and humble in the opinion of the money-changers and time-servers, and yet in the end he will be able to exclaim in triumph, "I have fought a good fight. I have kept the faith," and quietly and comfortably he may say to his own heart, "Henceforth there is laid up for me a crown of righteousness." And what more does a man want? True, some great souls have aspired to other crowns and other kinds of rewards, but without exception the result has been the gall and bitterness of failure and disappointment. Take, for example, the case of Lord Bacon, the mighty genius, the original thinker, the prophet and the apostle of all the marvelous advances of modern science, which our own eyes have seen and our own ears have heard, and by and through which the comforts and pleasures of our daily life have been so richly enhanced! Bacon's ambitions and schemes for worldly advancement, in behalf of which he had not hesitated to sacrifice every consideration of honor, honesty, virtue, and gratitude, utterly failed him, and he found himself in the end a despised and desperate bankrupt, infinitely worse off than any one of the many heroes who have been able to say in the hour of their defeat, "All is lost save honor." Bacon's honor was lost, and what was there left to the unhappy wreck, magnificent even in its fall? In this last extremity he still retained a something which, if he had, by hearkening to the higher and better prompting of his nature, preferred to the seductive attractions of social and political preferment, would without doubt have secured for him not only escape from the dangers which finally overwhelmed him, but which would have secured for him a life of peace, and happiness, and honor, instead of one of disappointment and dishonor. Wealth, place, preferment, the gauds and shows of the world, he had sought; but the deepest place in his heart was not for these. And when these failed him; when the edifice of worldly greatness he had laboriously reared lay crumbling around his feet; when in age, and sickness, and disappointment all the joy seemed gone from life, he turned with an almost new-born youthful activity to find in study and investigation a still unfailing source of interest and delight. It seems difficult to imagine a more impressive lesson for the young man of intellectual ambition than that furnished by the life and experiences of this great but ill-starred historical character. Suppose that Lord Bacon had resolved, as I hope you will this day resolve, to despise the gauds and shows of this world, and suppose that he had adhered with unswerving loyalty to his real, first love, which was also his last, namely, the love of knowledge and science, how much happier would his life have been, how much more happy and honorable its conclusion, and how much richer would have been the inheritance bequeathed by him to his fellow men.

The lesson for you is unmistakable. Having entered upon a life of scientific humanitarianism, resolve to-day that no gauds or shows of the world shall be permitted to seduce you from the inspiring and soul-delighting business of acquiring knowledge and turning it to practical account, for the benefit of your fellow beings.

It occurs to me to mention one or two additional resolutions which seem to be worthy of your careful consideration and practical acceptance. Resolve now, once for all, that you will avoid the awful whirlpool of debt. "Neither a borrower nor a lender be." Indorse no man's note and ask no man to indorse yours. "*Facilis descensus Averni*," and the beginning of the end, the ruin of many a promising professional career, has been written in the apparently inoffensive terms, "Ninety days after date I promise to pay." Discouragement, grief, heart-burning, and without doubt professional crime have ofttimes been the ultimate result of such temporizing expedients. Therefore, my earnest wish for you who now hear my voice is that you may, among other good resolutions, firmly abide by this one, "Owe no man anything."

The next resolution I offer for your acceptance with considerable hesitancy. In all probability its applicability is limited. Nevertheless, I give it for what it is worth and to whom it may concern. It refers to the question of matrimony, than which, so far as my experience extends, there is no more interesting subject for young men in general and for medical graduates in particular. If there really remains one man amongst you who is still heart-whole and fancy-free, to that man I say, resolve to "gang warily." Matrimony involves great responsibilities and is not to be entered upon hastily. The life of a young doctor, if he is worthy of his high vocation, is a progressive and ever-increasing life, and the sweet young girl, who to-day seems all perfection in his eyes, may in a few years, when he has attained to full growth as a professional man, find herself unequal to his intellectual and social requirements and a cause of bitter regret and bitter diappointment to him no less than to herself. Observation and experience have convinced me that the trite old saying that a doctor, to be successful, must be a married man, is an inaccurate and an unworthy one. That proverb should, in my opinion, be altered to read, "A doctor, to be successful and happy, must above and before all things be a good and a pure man. His life and character must be above reproach." Some of the best and most highly honored and trustworthy doctors I have ever known have been unmarried, while some of the very worst and most dangerous have been husbands and fathers. To act wisely and well in the all-important business of choosing a helpmeet, a man, and more especially a doctor, requires

to possess the wisdom and the knowledge of human nature, which can only be acquired by mature experience.

The rapid flight of time compels me to confine my additional suggestions within the limits of bare mention, and still I feel reluctant to omit them entirely. One is to cultivate a taste for the study of professional history and biography. The pleasure and profit attainable by this means are, in my opinion, beyond calculation. So strongly do I feel on this subject that if I had the power I would have a chair devoted to it established in every medical college.

With one more suggestion, which I ask you to adopt to-day, I will stop. It is this: Avoid conflicts, controversies, and unkind correspondences with your professional brethren. To secure this most valuable consummation I beg of you to eschew pen, ink, and paper; go straight to the offending brother and face to face argue your case; listen respectfully and patiently to whatever he may have to say; and in ninety-nine cases out of a hundred the whole trouble will be happily and honorably disposed of. Finally, I urge you to begin this very day the business of forming and adhering to good resolutions to the best of your ability, and your reward will surely be very great. The glitter and the glory of the battle-field will not descend upon you; the fame and distinction of the orator and the parliamentarian may pass you by; but just so surely as you do your whole duty in your own sphere and to the best of your ability, so surely will you attain to as great a degree of happiness and honor as human nature is capable of. And so, therefore, my last word to you is to wish you God-speed in the matter of making and keeping your good resolutions, and, before all others, remember this one:

> Be obstinately just;
> Indulge no passion, and betray no trust;
> Let never man be bold enough to say,
> Thus and no farther shall my passion stray;
> For one fault past compels us into more,
> And that grows fate, which was but guilt before.

OPERATION FOR THE CORRECTION OF A RECTOCELE, A CYSTOCELE, DISPLACED UTERUS, AND LACERATED CERVIX.*

BY PROF. BARTON COOKE HIRST.

In the past two or three clinics I have shown you some of the results following a bad management of women in labor. To-day I have a case to bring before you showing a bilateral laceration of the cervix, a subinvoluted uterus with chronic inflammation, together with

*This interesting operation took place at the Philadelphia Hospital, Jan. 30, 1899.

a rectocele and cystocele. The cervix can easily be seen protruding through the vulva orifice, therefore there is a tendency to prolapse. For the correction of the cystocele the Sims operation is very often performed, but it is unreliable and ineffectual. The best operation is an oval denudation and a continuous catgut suture in three or four tiers, all but the upper layer being buried sutures, which brings the edges in close apposition, and leaving at the surface a neat linear scar. When the healing process is complete there is a very strong cicatrix from three-fourths of an inch to two inches in depth.

I have found that after the Sims operation there is generally a recurrence of the cystocele in two or three years, if not before, whereas I have seen patients, twelve years after the oval denudation and tier-stitch operation had been performed, with the anterior vaginal wall in perfectly good condition.

If any plastic operation in the vagina is performed and there should be any tendency to a cystocele, it should be corrected then and there; if not the bladder never entirely empties itself, the woman complains of discomfort, and has frequent micturitions. She always attributes her trouble to the operation done on the posterior vaginal wall, which she believes has been inadequate, and she therefore blames the physician. All this difficulty can easily be done away with, simply by curing the cystocele. The formation of a cystocele might be compared to the descent of a glacier, pushing every obstacle before it. The head passing down the genital tract pushes all the soft loose tissue on the anterior wall in front of it; the submucous attachments are broken, allowing the anterior vaginal wall and the bladder to prolapse out of the vulva orifice.

The formation of a rcetocele is due to the laceration of the fibers of the levator ani muscles. In consequence of the destruction of its support, the posterior vaginal wall bulges forward and the rectum protrudes into this pouch, the two together thus forming a rectocele. The same thing takes place in the anterior wall, except that instead of the rectum the bladder falls into the pouch formed by the bulging anterior wall. Thus the vaginal wall and the bladder constitute the cystocele. This displacement brings the bladder lower than the vesical sphincter or urethral orifice; thus the urine is retained and may by its decomposition cause cystitis. The weight of the displaced bladder filled with urine occasions an uncomfortable dragging sensation in the region of the pelvis, and especially when the woman stands erect. This irritation caused by the prolapse of the bladder and the residual urine is the explanation of the frequent micturition.

In this patient the cervix is so irregularly lacerated that the only

remedy is its amputation. The uterus is subinvoluted, and its increased weight favors its descent along the birth canal. The congestion accompanying the subinvolution is the cause of the woman's leucorrhea and menorrhagia. On account of the inflammation or congestion of the endometrium I must use the curette. In at least nine-tenths of the operations for rectocele Emmet's operation is the one of election. However, I think Hegar's operation gives the best results, if it is desired simply to diminish the caliber of the vagina, as in many cases of prolapse. I shall decide upon the appropriate operation when I come to the repair of the injury to the posterior vaginal wall. In beginning this operation the first thing to be done is to dilate the cervix, and I do this by catching the anterior lip with a double tenaculum and inserting first a small dilator, which is followed by a larger one. Any physician ought to be able to dilate and curette the uterus.

This operation is frequently demanded in general practice, and if properly performed it will gain the physician quite a reputation. Coming back to the subject of the dilatation of the cervix, it may sound paradoxical to recommend the dilatation of a cervix which must be operated upon for a laceration; but there is usually a cicatricial constriction along the site of the laceration, and unless this is dilated the drainage of the uterine cavity is not satisfactory. In dilating the uterus itself plenty of time should be taken, because if done too rapidly there is great danger of splitting the uterus. The physician should be absolutely certain that the dilator has passed the internal os and has entered the uterine cavity.

In some cases the cervical canal is quite long, and it is therefore alone dilated and curetted, naturally without relief of the woman's symptoms. I use first a large curette, then a small one, in order to get into the corners of the uterus, and follow this with a douche. I now grasp the cervix with two double tenacula and bring the uterus into full view, then make an oval incision with a knife, being extremely careful not to injure the bladder. Next the whole of the interior vaginal wall, within the oval-shaped space marked out by the knife, is rapidly dissected off with a blunt-pointed scissors curved in the flat, the flap being removed in one piece. It is an advantage to draw the outline of the flap to be removed with a knife and to remove it with scissors, as we thus unite both with celerity and accuracy. I now take a long strand of catgut and a straight needle and bring the margins of the mucous membrane nearest the meatus together, then run the continuous stitch down the middle of the denuded surface, bringing the middle third of the wound together, and diminishing by this much its width. The same suture after reaching the cervix is carried back

again toward the urethra, now uniting the outer portions of the wound. Finally it is again run down toward the cervix, bringing together the mucous membrane in a straight line and covering in all of the denuded surface. In this way I obtain a firm cicatrix about two inches in depth. I now finish the amputation of the cervix and put in the catgut sutures in the form of the spokes of a wheel, being careful not to occlude the cervical canal. Occasionally after amputation of the cervix there is secondary hemorrhage, and to prevent the possibility of a dangerous loss of blood the vagina should be firmly packed with a strip of gauze, and then a large vulva pad should be applied and held in place by a tight T-bandage. This forms a point of resistance for the vaginal packing which the vaginal wall itself does not give.

As we now come to the posterior vaginal wall and pelvic floor it appears that the Emmet operation will be the suitable one. I shall perform it with my own modifications demonstrated at a former clinic.

THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.

BY A. G. ELLIS, M.D., PHILADELPHIA.

The antiseptic treatment of enteric fever does not hold a very strong position in Philadelphia at present; under the lead of Professor Wilson, ably seconded by Professors Tyson and Musser, the Brand treatment is largely used. With these teachers it is regarded as wretched treatment to attempt to modify this disease with the use of internal antiseptics; they claim that the germs are scattered through the organs of the body, and the few or many in the intestines are not the sole cause of trouble.

On the other hand, Professor Da Costa, although rather non-committal, does not use the cold-water treatment as freely as his *confrères*, and leans more extensively on the use of drugs. He is undoubtedly the leader of Philadelphia physicians, and hence his marvelous judgment and extensive experience give his views the greatest weight. In a recent lecture on typhoid fever he stated that he had found great benefit fron the use of the double salt, the bimuriate of quinine and urea, and also from beta-naphthol, in obstinate or persistent cases of typhoid fever. His remarks in this connection were so interesting that they will bear repeating. He spoke as follows:

"The double bimuriate of quinine and urea is not official and seems to have attracted no attention from the rank and file of the profession. I wish to report its favorable action in certain cases of typhoid fever.

"In one case of typhoid fever under my care the temperature ran high, despite the fact that frequent recourse was made to sponging. In addition to this the patient had double pneumonia of the type that frequently accompanies typhoid fever—that is, a heavy congestion, with here and there a spot of consolidation. At present the man is doing extremely well; his temperature, which was at times 105.4°, is now around the normal line; his eruption has long since disappeared; and his lungs are practically normal.

"But these points do not furnish the interest in the case; it is the plan of treatment adopted which I think is highly beneficial. Finding that the temperature was high and the fever persistent, and having had recent experience with this drug, I ordered it in this case with excellent result. Twelve grains of quinine had been given daily, with no result, when I ordered this double salt to be given hypodermically. I had never used the drug until this winter, when I was persuaded to use it in cases of typhoid fever in which the elevation of temperature persisted. The drug has given excellent results. The advantage of the drug is its extreme solubility; its injection causes no pain and forms no abscesses.

"I believe the drug to be particularly happy in its results in cases of mixed infection—that is, where there is a mixture of malarial poisoning and typhoid infection. In one case of this sort which resisted all other treatment, the fever was speedily broken up by the use of this salt. This case had continued in an unsatisfactory state for nearly eight weeks, when this drug broke up the condition at once. It is well to know of such a drug, especially in these days, when we are apt to have many cases of this sort from our new colonial possessions. It is in just such cases as these, where the Widal test and the malarial organism are associated, that this double salt will be found very beneficial.

"Our next case is that of a girl who presents an exception to the general rule governing relapses in typhoid fever. Her temperature became normal on the twenty-eighth day of the first attack. This attack had been severe, with a temperature in the neighborhood of 105°. After remaining normal for forty-eight hours the temperature *gradually* rose, being an almost exact reproduction of the original rise, and attained a height of 104°. Of the other symptoms diarrhea is the only one to return, and that is not at all excessive. No spots have appeared, there has been but little abdominal pain, and there is nothing in the case to give anxiety.

"The present treatment of the case is the giving of two grains of beta-naphthol every fourth hour, two drachms of whiskey with the same frequency, and liquid diet.

"We have been using beta-naphthol in typhoid fever for some years, and with very good results. The characteristic sign that the drug is producing its effect and having the desired influence is that it seems to disinfect the stools, they distinctly losing their odor. The influence of the drug must be beneficial in view of the fact that this result is produced. I further find this in regard to its use, that the tendency to relapse is less in cases where it is employed. Of course relapses occur, the present case being an instance, but I think the tendency is lessened, and I also think there is apt to be less diarrhea.

"Other means of the same kind have been used in the antiseptic plan of treatment. Salol has been used and is still the favorite with some practitioners. In regard to its use I find that it disturbs the kidneys much more than does beta-naphthol, some few cases going so far as to have blood in the urine. On the whole, then, I think it is less satisfactory than is beta-naphthol. I am far from saying that this latter drug is a specific in the disease in question, but its action is such that we use it almost as a routine treatment."

MYDRIATICS AND MYOTICS IN GENERAL PRACTICE.

BY J. A. L. BRADFIELD, M.D., LA CROSSE, WIS.,

Oculist and Aurist, St. Francis Hospital.

The number of cases seen by the specialist where vision has been either lost or greatly impaired by the non-use or misuse of mydriatics and myotics suggests that a better understanding of such agents by the general practitioner is very important.

Certain poisons when instilled into the eye cause dilatation of the pupil, and are known as mydriatics—atropine, homatropine, duboisine, hyoscyamine, scopolamine, and cocaine being the most important. Cocaine instead of paralyzing the sphincter muscle, as do the other mydriatics, causes mydriasis by contracting the blood-vessels of the iris, and hence may be used where other mydriatics are not permissible. Mydriatics, where used to any extent, also cause paralysis of the ciliary muscle, resulting in enfeebled or destroyed accommodation.

Other poisons, as eserine and pilocarpine, cause contraction of the pupil and spasm of the accommodation, and are called myotics. When the iris becomes congested it becomes broader, and the pupil correspondingly smaller; consequently the dilatation of the pupil reduces the congestion of the ciliary region, which is so desirable in inflammatory conditions of the uveal tract. One important exception, however, should never be forgotten—never to dilate the pupil when there is an increase of intra-ocular tension, except by cocaine.

The principal lymph-space of the eye is a canal in the anterior scleral region, encircling and anterior to the ciliary body, known as the canal of Schlemm. The lymph from the anterior chamber flows through this canal into the anterior ciliary veins, and into the general circulation. If this canal becomes closed, the intra-ocular tension rises, the eyeball becomes hard, and the condition known as glaucoma exists. The physician who is unable to differentiate between glaucoma and iritis should never use a mydriatic or a myotic.

Primary glaucoma is a disease of old age, seldom occurring under forty. It may be acute or chronic. Acute glaucoma is characterized by enlarged anterior ciliary veins, edema of lids and conjunctivæ, shallow anterior chamber, pupil dilated and sluggish, cornea hazy and insensible to ordinary irritations, optic disk, when seen, cupping out to the edge, vision poor or absent according to the stage of the disease, pain in eye and especially in supraorbital region, and when severe, nausea and vomiting.

Chronic glaucoma has the same symptoms, but in milder form, and often prolonged for years; it may be supervened at any time by an acute attack.

Traumatic or secondary glaucoma is caused by injuries to the ciliary region, and may occur at any age.

The lamina cribrosa is the weakest part of the eyeball, and a prolonged intra-ocular tension causes atrophy of the optic nerve in this region, the pressure of severe acute glaucoma often being sufficient to destroy vision in a few hours. The medical treatment of glaucoma consists in the use of myotics—one drop of a solution of eserine sulphate, one-fourth to one grain to the ounce of distilled water, should be instilled into the eye often enough to keep the pupil contracted to about one-third natural size, and so kept till tension returns to normal, usually one drop instilled from two to four times a day sufficing. The more severe cases require surgical treatment. Unfortunate indeed is the patient should a mydriatic be used instead of a myotic.

Iritis begins with photophobia, deep ciliary congestion, darkened iris and contracted pupil, cornea and aqueous hazy, often edema of lids and conjunctivæ, great pain shooting into the temple, especially in early morning, pupil on dilatation usually adhering to anterior of the lens and dilating unevenly. Treatment, a mydriatic, atropine sulphate, four grains to the ounce, being the one usually chosen. In mild cases one drop repeated a few times a day is often sufficient; but in severe and neglected cases it is often necessary to employ stronger solutions, sometimes using the pure crystals. Atropine often sets up a conjunctivitis, when this solution may be used as an ointment; but its use must never be stopped until dilatation is accomplished, or local or

constitutional symptoms appear, when some other mydriatic must be substituted, duboisine sulphate .5-per-cent solution being the best. As the inflammation subsides, less of the mydriatic will be required to keep up the mydriasis; but it should be maintained till the ciliary congestion has disappeared. Should the pupil be allowed to remain contracted it will become grown to the anterior capsule of the lens and cause occlusion, or where a large amount of plastic material is deposited, exclusion of the pupil, and blindness will be a result. When the pupil is occluded the aqueous, not being able to reach the lymph-channel, presses the iris forward, closes the canal of Schlemm, and causes secondary glaucoma; and unless operated, the eye is lost.

Mydriatics and myotics being powerful poisons, the precaution should be taken when instilled in any quantity to press on the lacrimal sac and prevent their passing through the nasal duct into the general system. Atropine, even in weak solutions, sometimes causes severe conjunctivitis and eczema of the face, when it should be discontinued. When general toxic symptoms occur, as dry throat, flushed countenance, quick pulse, fever, nausea, and delirium, it should be immediately stopped; and if more severe symptoms persist, a hypodermic injection of morphine administered.

To summarize:

1. Mydriatics and myotics should never be used without clear indications.

2. Mydriatics should be used in iritis, cyclitis, choroidoretinitis, and keratitis, and when the pupil is small or not already dilated, after severe injuries to the ciliary region.

3. Mydriatics should never be used where the pupil is already dilated, or where there is any tendency to increase of intra-ocular tension, again excepting cocaine.

4. Myotics should always be used when there is a tendency to increase of intra-ocular tension and the pupil is dilated.

5. Myotics should not be used where there is ciliary congestion and pupil already contracted.

6. In threatened or perforating ulcers of the cornea, if central, mydriatics should be used; if peripheral, myotics.

7. For dilating pupil for ophthalmoscopic examination use homatropine, one- to three-per-cent solution, as the effect soon passes off.

8. Cocaine, being an exception in the way of operation, may be used to dilate the pupil where there is a shallow anterior chamber, or even high tension, in old people when needed for ophthalmoscopic examination.

9. Never use atropine in glaucoma.

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EDITORIAL ARTICLES.

BERTILLON'S CLASSIFICATION OF THE CAUSES OF DEATH.

Important results in medical statistics are only to be achieved by the adoption of some uniform method in the classification of the causes of death. If any deductions of universal significance are to be made, it is important that some arrangement shall be arrived at by the leading nations of the world as soon as possible whereby they may acquire a common basis for their statistics. The beginning of a new century has been seized upon by the American Public Health Association as an extremely opportune moment for the adoption of some such system of keeping registration statistics, and as nothing better at present presents itself, the Association urges the adoption of the Bertillon system of classification as the one best fitted to serve the purposes of the present age. No perfect system of keeping statistics has ever been devised, and there is probably no system which the progress of medical science would not in time render obsolete.

One of the advantages of the Bertillon system is that it does not require that physicians in reporting deaths shall conform to any particular classification of disease. It is only necessary that they should make a precise statement of the cause of death, using any accepted terminology for the time. The translation of their report in the formal list of the statistical table becomes a matter pertaining to the work of the registration office.

The basis of the Bertillon system of classification seems to be one which is exceedingly reasonable and based upon a conception of underlying pathology, in which community of genesis is paramount. Thus, if we take as an example the classification of pneumonia, we are first told what the title is to include, and secondly, what it is not to include. The title would include acute pulmonary catarrh, interstitial pneumonia, cirrhosis of the lung, pulmonary sclerosis, splenopneu-

monia, pneumonia of the apex, peripneumonia, pneumopericarditis, typhoid pneumonia, and it would not include caseous pneumonia, specific pneumonia, bacillary pneumonia, or any other synonym of tuberculosis of the lungs, pleuropneumonia, or pulmonary congestion. The system as arranged allows for one hundred and sixty-two different classifications. That constant revisions will be called for by the demands of increased knowledge is of course inevitable, but such adjustments will be simple when the fundamental scheme meets with general adoption, the important point being that there shall be no such changes in classification until formal revision has been made.

It is impossible to exaggerate the value of reliable vital statistics, and it is a national duty for governments to lend their assistance to well-considered schemes, and to initiate reforms in this important branch of public safety.

EDITORIAL NOTES.

Lavage in Uremia.

With a view of diminishing the sources of intoxication, Huchard recommends the employment of three forms of lavage. A great number of the toxins of uremia form in the stomach, the intestine, and the blood; he therefore employs three lavages—one of the stomach, one of the intestine, and one of the blood. He urges that we do not delay the use of these until the appearance of convulsions, coma, and Cheyne-Stokes respiration. It may then be too late. Where the patient has hyperchlorhydria, the stomach contains powerful toxins, and if it is dilated, retains these. The indication then is to evacuate these by lavage. It is considered that intestinal antiseptics do not do much in the way of counteracting intestinal toxins. Huchard therefore advises the employment thrice a day of an intestinal lavage, whereby 3½ pints of boiled water containing seven per cent of chloride of sodium is injected into the bowel. The introduction of saline solution directly into the veins is, of course, a dangerous and difficult operation, and should not be needlessly employed, but the introduction of ten ounces of this solution twice a day acts very well in cases of acute toxemia. By the employment of these three lavages M. Huchard maintains that he has attained excellent results in the treatment of uremia, better than those which have resulted from the employment of emetics and purgatives, and better than those following the continual use of intestinal antiseptics.

ITEMS AND NOTES.

A RECRUDESCENCE of the bubonic plague is feared in Hong Kong.

DR. WILLIAM OSLER, who delivers the Cavendish lecture in London this year, leaves for Europe May 29.

INFLUENZA is rife in Berlin. Many of the schools in eastern Prussia are closed on account of the rapid spread of this epidemic.

A MONUMENT to Pasteur was unveiled at Lille, France, on Sunday, April 9. On the same day the Pasteur Institute of Lille was formally opened.

THE widow of the late Sir Morell Mackenzie is earning her living as a modiste, and is about to sell her late husband's library to raise money to live on.

BY the will of the late Edward Austen, of Boston, Harvard University will receive $500,000 and Harvard Medical School Bacteriological Laboratory $10,000.

THE twenty-fifth anniversary of their professorships has recently been celebrated by Professors Albert of Vienna, Eldenburg of Berlin, Pick of Prague, and Heger of Brussels.

A BILL has been introduced in the New York Legislature by Senator Sullivan prohibiting department stores from operating a drug department, forbidding the sale by them even of patent medicines.

SINCE the 6th of August there have been killed in battle and accidentally shot in the Philippines 93 soldiers; died of wounds, 24; died of disease, 234; making a total number of 351 deaths.

DR. ALEXANDER J. C. SKENE has resigned from the presidency of the Long Island College Hospital, with which institution he has been officially connected ever since obtaining his medical degree there in 1863.

THE porous plaster and liver pill trust, says the *Medical Record*, is one of the latest combinations to be established. The enormous amounts involved in the transaction is some slight indication of the number of people who put their trust in such preparations.

THE German Reichstag has recently voted an appropriation of 60,000 marks for the expenses of a scientific expedition under the leadership of Professor Koch, who is to be sent to the tropics to continue the investigation of malaria begun by him some time ago.

It has been decided by the War Department to devote a sum not to exceed $330,000, to be collected from tonnage duties at Cuban points, toward establishing and maintaining a quarantine station at Havana under the supervision of the Marine Hospital Service.

A committee consisting of Professors Broucardel, Kelch, Duchardine, Dumas, and Valard have been appointed by the French Minister of War to investigate causes of accidents occurring in consequence of the ingestion of canned meats, and take measures to prevent them.

Dr. Stevenson, of the Marine Hospital Service in Cincinnati, has been directed by the government to investigate the causes of an alleged epidemic of cerebrospinal meningitis in that vicinity, of which about one dozen cases have been reported within the last three months.

The Austrian Government has recently issued an order prohibiting the sale of organo-therapeutic preparations by druggists unless they are prescribed by a medical practitioner. At the same time the druggists have been advised to buy such preparations only from reliable manufacturers.

The number of medical students studying at the five Swiss universities steadily increases from year to year; it runs up to 1181 for the winter term, 346 of whom are ladies (mostly Russian, German, Austrian, and American). The medical faculty of Bale numbers 126, Lausanne 158, Berne 240, Geneva 297, and Zurich 360.

Under Spanish rule prostitution in Cuba was licensed and under governmental control, frequent medical inspection of the women being required. In the Province of Pinar del Rio this inspection is continued under our military government, venereal disease being classed and treated as one of the largely preventable affections.

During 1898 the degree of Doctor of Medicine was conferred by the University of Moscow on fourteen, by the University of Kharkof on five, and by the University of Kief on three candidates. The number of students of medicine in the three universities severally was on January 1, 1899, as follows: Moscow, 1294; Kief, 895; Kharkof, 709.

Aguinaldo, the Filipino patriot, entered the medical department of the Ponto Official University of Manila at the age of fifteen, where he worked under Professors Nalda and Buitrago. He afterwards studied at the Victoria College, Hong Kong. He was remarked for his ability when a student, but nothing else is known of his college career.

Not until 1603, when the researches of Sanctorius gave to the world her first thermometer, did the study of bodily heat become more than a subject of guesswork. As a matter of course, Hippocrates recognized the variations of surface heat in health and disease, but it was with him, as with many of his successors, a mere matter of the laying on of hands.

The Mecca for physicians now is asserted to be Bagdad, the ancient capital of the Khalifa, the Athens of Asia of the eighth century, and the center of Mohammedan science. With a population of 130,000 people, there are only three resident practitioners who have had a European training, and it is said they are doing all the work, the inhabitants no longer trusting their advisers of the Asiatic type.

During the academic year 1897–98 the total number of degrees granted by the seven medical faculties of France was 1180. Of these 661 were conferred by the Paris Faculty, 167 by that of Lyons, 121 by that of Bordeaux, 96 by that of Montpellier, 56 by that of Toulouse, 51 by that of Lille, and 28 by that of Nancy. In 1896–97 the total number of medical degrees conferred was 1106; in 1895–96 it was 1059.

At Passy, a suburb of Paris, recently, an abused wife avenged herself on a drunken husband by inflating his rectum with a pair of fire-bellows. Alarmed by the heartrending cries of her maudlin victim she sent for a physician. The doctor could think of no cause for such intense abdominal symptoms but caustic poison, and was about to report the case to the police authorities, when the guilty wife confessed.

A deal was closed March 25 at Keokuk, Iowa, by which the stock and building of the College of Physicians and Surgeons of Keokuk were sold to representatives of the Keokuk Medical College. The former college has about 2800 alumni, and was established in 1849, the latter institution in 1890. The two colleges will hereafter be under the same management and have the same faculties. The name is yet undecided. The consideration was $20,000.

In an editorial communication in a recent number of the *Philadelphia Medical Journal* the writer concludes as follows: "The gas companies seem to have three malevolent aims: (1) to ruin our eyes by gas that does not illuminate; (2) to ruin our bank accounts by compelling us to burn great quantities of gas in the hope of lighting our rooms; (3) to ruin our health by vitiation of our atmosphere. If we are rebellious they propose actual death by asphyxiation."

R. LEHMANN (*Semaine Médicale*, Nov. 2, 1898) states that if the patient keeps his eyes completely or partially open during the chloroform narcosis, and opens them whenever you try to close them, you can expect some accident more or less severe. This phenomenon was noted twenty-one times in 329 anesthesias, and in each one there was either continuous vomiting, arrested respiration, peculiarly protracted agitation, or asphyxia and syncope, requiring artificial respiration.

WOLFE records the case of a married woman, aged forty-five years, who menstruated for the first time eighteen months previously. In her forty-third year, having had amenorrhea till then, she was seriously frightened by an idiot, whereupon menstruation commenced and lasted two or three days, says the *Philadelphia Medical Journal*. From that time menstruation occurred irregularly until the woman conceived. She advanced to term, giving birth to a living child after a labor lasting only thirteen hours.

THE Hungarian Minister of the Interior recently issued an order regulating the use of massage in Hungary. The order was as follows: (1) Patients may be treated by masseurs, who are not physicians, only upon the order of a physician, and under the direction and responsibility of a physician; (2) massage of diseased abdominal and sexual organs, and of the eye, may under no circumstances be practiced by others than physicians. Infraction of this order is punishable by a fine of $40 and fifteen days' imprisonment.

A PROMINENT Detroit physician received the following letter a few days ago: "DEAR SIR—I inclose testimonials of my consumption cure the reciet for making this medicine is for sale as I have not money aenouf to see it through as the roots Dose not groe in canada or the states it is a german roots. if you have eny parties with Lung trubel I am willing to show you what the meidison can Do. it takes 4 to 6 weeks to make a cure.—Yours truly, AUGUST MEYERS, Williamston P. O., Ont." Mr. Meyers evidently has more faith in therapeutics than he has in orthography.

ACCORDING to the *British Medical Journal*, by a recent ordinance of the Superior Sanitary Council of Roumania women will not henceforth be permitted to hold the office of plasa medical officer (a sort of poor-law doctor paid by the State), or physician to a communal hospital. Only large hospitals, with special departments for diseases of women, are to be allowed to have female physicians or surgeons on the staff. As there are very few such hospitals in Roumania, this ordinance practically closes the door of public employment in the face of the medical women in that country.

ACCORDING to the *Medical Record*, under the Spanish rule, in order to practice legally in Cuba, it was necessary to hold a diploma of the University of Havana or of some University in Spain, viséed by the proper authority of the district. Those holding foreign diplomas were obliged to pass an examination or to obtain a temporary license. Since the expulsion of the Spaniards, the *Archivos de la Policlinica* complains, many foreigners have come to the island and begun practice without let or hindrance. Our contemporary naturally holds that such an abuse should be stopped by the authorities now governing the country.

THE Japanese believe in sanitation. The town of Teukcham, on the island of Formosa (taken from the Chinese), has a population of 40,000, with a high death-rate. It is situated in a swamp, and cannot be drained. The government has caused the inhabitants to pull up, root and branch, and move to a higher site, some miles off, giving to each householder the same size lot as he had at home, and, as the new town was laid off somewhat after the pattern of the old one, except that the streets are wider, a location corresponding to the one he vacated. The government put in sewers, water and light, etc., at public cost.

PLANS are being consummated, says the *Journal of the American Medical Association*, for the erection of a memorial tower for the University of Pennsylvania, in commemoration of the services of the men from this institution who fell in battle during the late war with Spain. It is hoped to lay the corner-stone of the building during commencement week. Those who lost their lives were Dr. John Blair Gibbs, class of '81, assistant surgeon U. S. N.; Dr. Lawrence Savery Smith, class of '88, surgeon of the Pennsylvania Volunteers, U. S. A.; Harrison G. Kimball, Lieut. John B. Scott, and George Elliott. The tower will cost $60,000.

THE late Professor Baron, a member of the faculty of law at the University of Greifswald, has, says *The Lancet*, bequeathed a sum of $125,000 to the city of Berlin, for the purpose of erecting a home for orphans. The Professor was a strong adherent to the principles of vegetarianism, and in his will he stipulated that none but vegetarian food should be used in the home. In addition to being a fervent vegetarian, he also looked on the medical profession with disfavor, and there was, therefore, another paragraph in his will to the effect that medical men were to be excluded from the board of managers, and that in cases of illness the advice of a "hydrotherapeutist" was to be obtained. The Municipal Council is in great difficulties in connection with this legacy, especially its last mentioned proviso.

FRENCH scientists have recently asserted (*Medical Review of Reviews*) that malic acid is an antidote to the bacillus typhosus, and it is, therefore, claimed that among the numerous virtues which cider is now supposed to possess is that of being a natural remedy of great value in the treatment of typhoid fever, owing to the large percentage of malic acid it contains. In Brittany, where cider is largely made for export, the peasants use, in their cider-making, water from pools near their farmhouses, believing that by so doing they promote fermentation, and the marked absence of typhoid fever among the Breton peasantry is chiefly due, it is claimed, to their large consumption of cider.

SOME of the more advanced of the physiologists, says the *Medical Times*, now claim that the posterior lobes of the brain are the seat of the highest intellectual faculties, a theory which is in direct opposition to that of the phrenologists and to popular opinion as well, the latter being that a high forehead is a proof of superior intelligence. To the large hind head has been attributed an unusual degree of animalism. Dr. C. Clapham, an anthropologist of high repute throughout Europe, has given arguments in favor of the posterior lobes in a recently published paper, which shows that man, of all creatures, has the most highly developed posterior lobes, and that the ablest men and races have them in the highest perfection. Idiots and confirmed lunatics, according to his investigations, have these imperfectly developed or in a very bad state.

RECENTLY in a small French town an old advertisement of a barber-surgeon was discovered. It reads as follows: "Isaac Macaire, clerk of the parish, barber, surgeon, shoemaker, school-teacher, blacksmith, and accoucheur. Shaves for one sou, cuts hair for two sous. Uses powder and pomade for well-raised young ladies and gentlemen, teaching them the polite language and manners of their grandsires. He teaches music, singing, and also blacksmithing. He also mends boots and shoes while you wait. Teaches the hautboy and the guinborde, cuts corns, puts on leeches, and bleeds. Gives rectal injections, teaches the cotillion and other modern dances. Sells perfumery, salt herring, spices, brushes, and confections. P. S.—He also teaches geography every Wednesday and Saturday, God aiding.—(Signed) ISAAC MACAIRE."

PASSED ASSISTANT SURGEON JOHN W. BRANSFORD, United States Navy, was advanced three numbers by the last Congress for heroism in the naval battle of Santiago. Surgeon Bransford was attached to the converted yacht *Gloucester*, which destroyed the Spanish torpedo boat destroyers, and having no wounded to demand his care he took

charge of one of the rapid-fire guns with marked effect, his conduct eliciting the official praise of his commanding officer. Dr. Bransford had served eighteen years as an assistant surgeon in the navy, but had afterward resigned and was in civil practice when the war broke out. He promptly offered his services and was given a volunteer commission. A bill to appoint him an assistant surgeon in the navy and place him on the retired list passed the Senate, but failed to receive action by the House during the more pressing matters which occupied the latter part of its session.—*Boston Medical and Surgical Journal.*

According to the *Philadelphia Medical Journal* an undergraduate mutiny in the University of Turin was recently in progress. It seems that Professor Fusari, a capable teacher with scientific qualifications, was appointed to the chair of anatomy against the wishes of the students, whose preferences were for another man. The appointment of Professor Fusari having been confirmed, the students of the advanced classes boycotted him and submitted him to all manner of insults. While lecturing to a number of the first-year students who had the courage to attend, Professor Fusari was again interrupted. The police endeavored to quell the disturbance and arrested several of the more prominent rioters. Later in the day more arrests were made, but the disturbance not ceasing and an attempt being made to rescue the prisoners, a regiment of infantry was called upon to preserve the peace. It is stated that the authorities are examining the circumstances of the rioting with a view to inflict punishment.

The important subject of diet of prisoners in the British prisons has been submitted to close investigation by a departmental committee, which has now issued a carefully drafted and well-seasoned report. The committee's recommendations on the whole may be summarized as making for better and more liberal dietaries. In taking this view they have been influenced by the fact that the existing scale of feeding for prisoners was arranged at a time when the feeding of the nation as a whole was coarse and careless; but the national style of living has so much improved of late years that the evil-doer can no longer live and preserve health on the fare supplied him in jail, so that something perilously like starvation is now added to his legal punishment. In particular it is recommended that the food of juvenile criminals should be better, for it is desired to treat them rather as degenerate than vicious, and to make of their prison a reformatory from which they may be expected to emerge better in body and mind alike. More, it is believed that if their physical health can be improved, their moral health will improve *pari passu.*—*Philadelphia Medical Journal.*

Mr. Henry Norman, the London correspondent of the *New York Times* (*Medical Record*) sends in a recent despatch two pieces of medical news concerning the rulers of Russia and Germany, which he says are undoubtedly correct. The first is, that the recent denials of the stories printed in Berlin about the Czar's health are diplomatically optimistic. His threatening danger is pulmonary trouble, and this has drawn much nearer lately. The cessation of semiofficial Russian communications to the press about the coming peace conference at The Hague also seems to point to some interruption to the Czar's enthusiasm. For anybody with congenitally weak lungs the Winter Palace at St. Petersburg is the worst residence in Europe, low-lying, cold, and damp; yet the Emperor of Russia is virtually condemned to spend a large part of his life there. The second piece of news, which the writer vouches for as certainly true, is that the German Emperor's old ailment, chronic suppurative otitis, has recently grown worse, so much so that Dr. Doyen, of Paris, the leading French authority on aural diseases, has been invited to examine the Emperor, and will probably operate on him. To avoid comment Dr. Doyen will first visit some German baths, as if for his own health, but his destination is Berlin.

Dr. Laborde, the well known physiologist (*Medical Review of Reviews*, No. 5, 1899), has informed the French Académie de Médecine of an important scientific discovery recently made by M. Georges Joubert. M. Joubert has been endeavoring for some time to solve the problem of how to supply air artificially to a man in a hermetically enclosed space. His hypothesis is that the seventy-nine per cent of the nitrogen contained in respirable air remains intact after the twenty-one per cent of oxygen has been consumed, and that the same nitrogen, if mixed with a new supply of pure oxygen, would form respirable air, if the carbonic acid and other products of respiration were removed. This inference has been found to be correct. The difficulty has been to devise a means of generating the oxygen, and it is claimed that, after long research, Joubert has discovered a chemical compound which, by contact with the atmosphere, clears the vitiated air of the impure gases produced by respiration, and furnishes automatically the requisite quantity of pure oxygen. Dr. Laborde states that six or eight pounds weight of this chemical substance will enable a man to live at least twenty-four hours in a sealed diving-bell. If Dr. Laborde's statement can be substantiated, it is clearly evident that a most important discovery of very great practical utility has been made.

NEW PUBLICATIONS.

AN AMERICAN TEXT-BOOK OF DISEASES OF THE EYE, EAR, NOSE, AND THROAT.

This book is a valuable addition to the "American Text-book" series. The work is one that should appeal to students, for the one volume comprises a complete text-book of diseases of the eye, ear, nose, and throat. The practitioner and specialist will find this work a volume of reference, and the articles, written by men who are authorities on the subjects portrayed, are of much practical worth. Special articles on The Standards of Form and Color-vision Required in Railway Service, The Roentgen Rays in Ophthalmic Surgery, The Practice of Ophthalmic Operations on Animals' Eyes, The Most Important Microorganisms having Etiological Relationship to Ocular Disorders, may be noted, and are not usually found in text-books.

Part II, which is devoted to the ear, contains much valuable and practical matter. Special mention may be made of the article on Complications of Tympanic Inflammation, by Dr. Herman Knapp, and Operations, by Dr. J. Orne Green.

The scholarly, clear, and thorough essays upon the anatomy and physiology of the upper respiratory tract by the late lamented Harrison Allen and by Freeman are likely to be for some years the best text-book publications in this line in the English language. It is sincerely to be regretted that Harrison Allen's death prevented his personal selection of the illustrations for his anatomical article.

Throughout that section of the work devoted to diseases of the nose and throat the character of the contributions as well as the subject-matter they have furnished is a guarantee of the general excellence of the work. The chapter on neoplasms of the upper air-passage is very complete and reviews the recent literature of the subject in an admirable manner. Considerable space is devoted to tuberculosis of the upper air tract, but the essay lacks directness and the practical interest which should be a feature of this important subject.

The work throughout is richly supplied with illustrations, there being 766 engravings, 59 of them being in colors.

An American Text-book of Diseases of the Eye, Ear, Nose, and Throat. Edited by G. E. De Schweinitz, A.M., M.D., Professor of Ophthalmology, Jefferson Medical College, etc., and B. Alex. Randall, M.A., M.D., Ph.D., Clinical Professor of Diseases of the Ear in the University of Pennsylvania, etc. Pp. 1251. Illustrated. Price, $7.00 net; sheep or half-morocco, $8.00 net. Philadelphia: W. B. Saunders, 1899.

PROGRESSIVE MEDICINE.

Progressive Medicine differs in many respects from any of the numerous year-books and annuals which appeal for the patronage of the busy physician. It is to be published in four volumes, which will appear at intervals of three months. This will insure the rapid diffusion of medical knowledge, and keep the reader well informed of all that is modern; it will also be a conspicuous gain to the reader in that he will not have to wait a year for the digestion of medical literature. Professor Hare has secured a corps of capable men, who each deals with his special department in his own way. The work is one which is bound to be popular, and it meets one of the needs of the modern man in a way that no other publication does.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth; 490 pages; 28 illustrations and 3 colored plates. Philadelphia and New York: Lea Brothers & Co.

A LABORATORY MANUAL OF ELECTROTHERAPEUTICS.

This is the outcome of the pioneer work which Dr. Herdman and his assistants have been doing for some years in the electrotherapeutic laboratory at the University of Michigan. Such a valuable laboratory course, of which this manual is merely designed as the laboratory companion, is most commendable and desirable in view of the increasing field of usefulness which electricity has as a therapeutic agent, and will ere long, doubtless, be regarded an essential part of every thorough and efficient medical curriculum.

The manual takes up successively the measurement and demonstration of current strength, battery polarization, reaction of different forms of cells, methods of joining cells, divided circuits, the different forms of electricity used therapeutically and their physiological actions and therapeutic uses, and many other important subjects which form an essential part of a thorough and practical laboratory course.

Numerous problems and experiments of value are suggested, and the book is copiously interleaved for laboratory notes. It is bound to be of especial value to the laboratory for which it was published, and will prove helpfully suggestive to all interested in such a practical course.

A Laboratory Manual of Electrotherapeutics. By William James Herdman, Ph.B., M.D., Professor of Diseases of the Nervous System and Electrotherapeutics, University of Michigan, and Frank W. Nagler, B.S., Instructor in Electrotherapeutics, University of Michigan. Pp. 159, and interleaved for notes. Ann Arbor: George Wahr, Publisher.

INTERNATIONAL CLINICS.

The usual number of interesting lectures find a place in the new volume of International Clinics. The first lecture, on Glonoinism, is an interesting contribution bearing on the effects of nitroglycerin in those engaged in its manufacture. There is an excellent lecture on The Treatment of the Patient During the Apoplectic State, which contains an admirable summary of the differential diagnosis between cerebral hemorrhage and thrombotic occlusion. Professor Urbanschitsch gives a valuable lecture on Hearing Exercises for the Deaf and Dumb. Another noteworthy lecture is that by Dr. W. Hale White on Alterations of Weight by Diet.

International Clinics: A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by Judson Daland, M.D. (University of Pennsylvania), Philadelphia; J. Mitchell Bruce, M.D., F.R.C.P., London, England; David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland. Volume IV. Eighth Series, 1899. Philadelphia: J. B. Lippincott Company, 1899.

GOLDEN RULES.

Messrs. John Wright & Co., of Bristol, England, send us several examples of their excellent Golden Rule series. These little books are very admirably presented to the reader. Each one contains a series of injunctions which cannot be too implicitly committed to memory by the medical student. They are of a size which makes it convenient for the student to carry them in his vest pocket. They deserve a wide circulation.

Golden Rules of Surgical Practice. By E. Hurry Fenwick, F.R.C.S., Surgeon to and Lecturer on Clinical Surgery at the London Hospital; Surgeon to St. Peter's Hospital for Urinary Diseases. Golden Rule Series No. I. Fifth Edition, Revised and Enlarged.—Golden Rules of Gynæcology. By S. Jervois Aarons, M.D. Golden Rule Series No. II.—Golden Rules of Obstetric Practice. By W. E. Fothergill, M.A., B.Sc., M.D. Golden Rule Series No. III. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Lim.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Multiple Sarcomata in a Child.

Frederick A. Packard, in *Pediatrics* of March 15, 1899, reports the case of a boy, three and one-half years of age, who was brought to the Children's Hospital on April 26, 1898. On admission it was noted that the right thigh was distinctly larger than the left, the difference in circumference being one inch. There was considerable rigidity about the left hip-joint. The lumbricoid was absent upon flexion, but passive movement of the joint gave no pain. Pressure on the trochanter did not produce pain. The left leg was distinctly spared in walking. Examination showed that the swelling of the left thigh was produced by a tumor mass which was apparently attached to the middle of the sartorius muscle. It was about the size of a small walnut and entirely free from pain. Further examination confirmed the absence of joint trouble.

The conditions remained stationary until May 19, when it was noticed there was a decided swelling of the left scapula, the tumor having the shape of that bone. Two days later the patient complained of pain under the left angle of the jaw. Nothing abnormal was found in that place. On August 31 there was found a remarkable enlargement of what appeared to be a lymphatic gland at the right angle of the jaw. The mass was freely movable, not tender, did not fluctuate, and seemed painless. The swelling on the left thigh was steadily growing. During the next month the tumors decidedly increased in size, and the child began to lose flesh. He was treated with corrosive sublimate, one grain, three times daily until salivation was produced, but without benefit. The masses slowly increased in size, and on October 25 one of the tumor masses from the right side of the neck was removed for diagnostic purposes. It was found to be a typical round-celled alveolar sarcoma. Shortly after this the boy was removed to his home, and up to the present time has not returned to the hospital.

Treatment of Chronic Ulcers of the Leg.

John B. Corsiglia, in the *New York Medical Journal* of March 25, 1899, says that in the treatment of a chronic ulcer situated below the middle of the leg we should at first scrub the leg and ulcer with soap

and water and dry thoroughly. No matter what kind of an ulcer it is, the aim is to reduce it to a simple ulcer. This is done by curetting, and as this is quite a painful procedure, two or three drops of a four-per-cent solution of cocaine is injected in the vicinity of the ulcer. The author states that the best mode of using cocaine hypodermically is to put the needle in superficially and horizontally as far as it will go. After two or three minutes, during which anesthesia appears, two or three more drops is injected with deep puncture. If much bleeding results on curetting, a sponge is dipped in a two-per-cent solution of carbolic acid and the ulcer compressed for five or ten minutes. At the end of this time, if bleeding continues, a wet dressing of the same solution is left on for twenty-four hours. The next aim is to get the ulcer dry and to dress it dry. The writer says he has obtained the quickest results by brushing the ulcer with pure carbolic acid and then touching this with a little cotton dipped in alcohol. Alcohol has the power of absorbing carbolic acid and so lessening the action of this drug. If at the end of two days any oozing is found, the ulcer is again brushed with pure carbolic acid. In regard to the bandage, it is begun at the toes and extends up as far as the knee. A properly applied bandage is of the utmost importance to these cases. When the ulcer is perfectly dry small pieces of adhesive plaster heated over an alcohol lamp are applied, one piece overlapping the other, and allowing a small place between for any discharge which might take place. After a few days, if no exudation is seen on the dressing, and there is no displacement, it is left on for a week or two. Of course, each case is a law in itself. The author says he has not yet seen an ulcer, no matter how old it may be, that would not yield to this treatment.

Prognosis in Erysipelas by Examination of the Blood.

Speaking at the meeting of the Society of Biology held on February 18 (*Lancet*, March 11, 1899), M. Chantemesse took occasion to remark that there existed hardly any clinical signs by which could be diagnosed the course of an attack of erysipelas, whether it would resolve or whether, if once resolved, a relapse would follow. Examination of the blood in erysipelas, whether made during an attack or during the period of convalescence, furnished valuable information upon this matter. The curve of the number of leucocytes in a case of erysipelas followed very closely that of the temperature, but this leucocytosis did not show equally throughout the various blood elements. There were polynucleated cells which showed an increase as soon as the malady was established, while at the same time the number of mononucleated cells diminished, such diminution occurring

chiefly in the lymphocytes. When recovery took place it was signalized by a fall in the number of polynucleated cells. The eosinophile cells, which fell in number during the course of the illness, only appeared again when the blood infection was altogether at an end. M. Chantemesse had noticed that sundry suppurative affections which appeared in the course of erysipelas were generally of favorable import, for he had often noticed patients with erysipelas recover who had suffered from this complication.

M. Malassez stated that some time ago he had occasion to examine the blood in a number of cases of erysipelas. He had always noticed profuse leucocytosis, and the formation of an abscess in such patients produced a veritable shower of white corpuscles.

M. Vagnez said that he had often been able to prognosticate septic affections by finding marked leucocytosis in patients who were under treatment.

Treatment of Burns and Ulcers.

H. A. Richy (*International Journal of Surgery*, April, 1899) says that for some time he has been interested in testing the properties of picric acid. He says: "Several months ago a preparation was brought to my attention which contained picric acid as one of its active ingredients, together with formaldehyde and other efficient antiseptics and analgesics. From this combination, I have derived so much better results than from any one of its constituents alone that I am constrained to briefly report my experience. One of the most striking properties of this preparation is the prompt relief of pain and itching observed after its application—an effect most grateful to the sufferer. In cases of burns and recent ulcers it also promoted rapid healing, while in chronic ulcerative conditions it proved an excellent analgesic and a very serviceable auxiliary to other measures. The only objection to the remedy occasionally encountered is staining of the skin; but while this is disagreeable in a few cases, it is more than compensated for by the feeling of comfort to which it gives rise."

Some Points in the Treatment of Appendicitis when Pus is Present.

Geo. Worlsey (*Medical Record*, April 1, 1899) concludes a very interesting article on this subject as follows:

1. In operations for appendicitis when pus is present, the first consideration is the life of the patient, the second the avoidance of disagreeable sequelæ, of which ventral hernia is the most common and hence the most serious.

2. Postoperative ventral hernia may be largely avoided in spite of the necessary use of drainage: (1) by the use of the McBurney muscle-splitting incision; (2) by suturing most of the wound, and (*a*) the use of provisional or secondary sutures in the part left open for drainage, or (*b*) the early removal of the gauze drain, facilitated by the use of a rubber-tissue collar where it passes through the wound, allowing the walls of the cavity and sinus to become approximated, thus avoiding the necessity of filling up by granulations.

3. By the latter method complete and firm wound union has been obtained in fifteen and one-half days on the average, and in all ordinary cases inside of three weeks. To this end the appendix should be removed if possible.

4. The relative frequency of hernia following pus cases with drainage is another argument for early operation in appendicitis. It is also an answer to the charge that surgeons are too eager to operate for appendicitis, not infrequently expressed by physicians who would defer operation until the chance of success is diminished and the danger of postoperative hernia increased.

Carron Oil for Specific Urethritis.

W. E. Wamsley (*Brooklyn Medical Journal*), at the suggestion of a patient, has tried linimentum calcis as an injection in gonorrhea and gleet with unusually good results. He has used it for a burn, and it occurred to the patient that it might be good in gonorrhea, so he asked the Doctor's opinion about it. The Doctor at first paid no attention to the suggestion, but later it occurred to him that he might give it a trial. He has since used it in twenty-seven cases of acute specific urethritis after a three days' treatment with compound copaiba mixture of the National Formulary, using it four times a day, and every case was cured in three or four days. In nine cases of gleet a complete cure was accomplished in from seven to nine days with the carron oil injections only. The author warns against the danger of this emulsion becoming rancid if kept long, and advises that it be only used when freshly prepared.

Let the Term "Amputation" be Abolished Altogether in All Traumatisms Involving the Extremities or Their Appendages.

Thos. H. Manley, in the *Louisville Journal of Surgery and Medicine* for April, 1899, says in support of his argument for the abolition of the term "amputation" that modern surgical science and art have so revolutionized the therapy of crushed members that the term "ampu-

tation" should be expunged from all text-books on surgery and its practice severely interdicted. The word implies severance *en bloc*—something never called for under these circumstances. The term excision or resection should be substituted for it.

Effective embalming of the shattered limb permits of safe delay and the preservation of every possible portion of tissue.

Reaction established, in many cases the surgeon should turn to utilize the important auxiliary art of osteoplasty, eburnation, bone-grafting, tissue-sliding, etc.

This applies to traumatisms chiefly, though they are not without a range of considerable limit in all pathological conditions of a non-malignant character.

It is obvious that in wars, in a pestilential country, they have no application at all under usual conditions, as in field hospitals near the line of action.

Final Report of Schlatter's Case of Removal of the Stomach.

Carl Schlatter (*Medical Record*, March 18, 1899), in the final report of the case of total extirpation of the stomach of a woman suffering from carcinoma of that organ, says that the death of the patient was due to the multiple carcinomatous metastases, and could not at all be ascribed to inanition from insufficient nutrition. An entire year had the fifty-seven-year-old woman lived free from suffering, without a stomach, and had even gained notably in body weight in that time. Up to within the last week of her life she had been able to go about outside of the hospital, but then with the appearance of cachectic symptoms had rapidly succumbed to her malady.

MEDICINE.

Bronchitis, Pulmonary Emphysema, and Asthma.

Samuel Gee (*Philadelphia Medical Journal*, March 25, 1899), in closing his lecture before the Royal College of Physicians of London, said: "We will revert to the results of our search into the causes of bronchitis. We found it to be highly probable that most catarrhs are due to a specific infection, and they often depend upon contagion spreading from man to man. This doctrine has very important bearings upon medical practice. It leads us to believe that the means by which we may prevent catarrh are to be found in ventilation and cleanliness, if, indeed, ventilation be not a kind of cleanliness. Experience confirms this belief. When epidemic catarrh prevails, where do we

find most of our patients? In those houses which are obviously the worst ventilated, even though they be the spacious houses of the rich. And where do our patients catch their catarrh? Either in houses of the kind which I have mentioned or in buildings where men most do congregate, especially in offices, shops, and churches. Large shops and stores, public museums and libraries, are ventilated as little as possible for fear of their contents being spoilt by smoke and dust. Many churches both in town and country are never properly aired for another reason—namely, because their architecture does not admit of it. Those 'rich windows which exclude the light' do worse than this—they exclude fresh air. The revival of Gothic architecture has been, from the sanitary point of view, a great mistake. Our despised forefathers of the eighteenth century erected plain and simple buildings which could at least be well aired, well lighted, and kept warm and comfortable; nay, even the much-ridiculed churchwarden, with his brush and pail of whitewash, was a praiseworthy minister of health. Modern dwellings are no better than the churches. In the matter of domestic sanitation people have fixed their attention too exclusively upon the drainage and the water-supply; light and air are not reckoned. Many of the large red-brick houses which have been built in great numbers at the West End of London and elswhere during the last twenty-five years cannot be properly ventilated. The well of the staircase ought in every house to be a reservoir of pure air, and to have an independent supply from without. But in many houses the staircase cannot be ventilated except through the rooms, and, in fact, it never is ventilated. Nor are the rooms themselves much better off; their heavily mullioned windows are designed with small regard to the transmission of light and air. The subsidiary and merely ornamental arts, which do no more than please the eye, are studied to the neglect of that far greater art which promotes the happiness and welfare of the whole man—the art of preserving health."

Early Diagnosis of Cancer of the Lung by Microscopical Examination of the Sputum.

At the meeting of the Société Médicale des Hôpitaux on January 13, M. Paul Claisse (*Lancet*, March 11, 1899) called attention to this means of diagnosis. A man, aged fifty years, habitually in excellent health, began to waste. One day he expectorated two little grayish-white fragments almost of the size of a cherry-stone and with irregular surfaces. Examination of a section showed epithelial tissue composed of unequal elements, in places cubical, in others arranged concentrically, like epidermic nodules. It was concluded that the fragment

was of pulmonary origin and epitheliomatous. At this time no signs of disease could be found in the lungs. After several weeks the diagnosis was confirmed, in particular by the appearance of currant-jelly expectoration. In a second case in which the diagnosis was already certain, the fragments were too small or too necrosed for thorough examination, but their presence at least showed that they belonged to a pathological tissue. M. Claisse pointed out that without systematic search the fragments might escape observation and be mistaken for inflammatory or alimentary products. As the diagnosis of pulmonary cancer is often difficult at the beginning, this means of diagnosis is valuable.

Treatment of Pneumonia Complicating Tuberculosis.

Da Costa (*Medical Fortnightly*, Feb. 15, 1899) in reporting a case of pneumonia which complicated tuberculosis said: "The patient has been ill five months with pain in chest, cough, and mucopurulent expectoration. Four days ago he had sharp pain in right chest and a chill. His condition to-day shows him to have an extensive bronchitis of both lungs, with pneumonia of the lower part of the right lung. His treatment is carbonate of ammonium five grains every two hours; also one-half ounce whiskey at same intervals. In addition he will be given ten minims tincture of digitalis every four hours.

"The cough aroused suspicion, and an examination of the sputa showed tubercle bacilli. This disease will not be benefited by the acute attack, but the prognosis will be more grave. He will likely recover from this acute process under treatment given, and will not be treated for tuberculosis until he has recovered; then stimulating treatment may be instituted, but not while the pneumonia lasts."

Nourishment by Intravenous Injection.

Lilienfeld (*Zeitsch. f. Diat. u. Physikal. Therapie*, 1899, No. 3; *Medical Review of Reviews*, March 25, 1899) has made numerous experiments upon the results of injecting solutions of grape-sugar into the veins of rabbits for nutrient purposes. He thinks he has satisfactorily demonstrated the practicability of this method, and that alkaline solutions of the sugar are especially adapted for nutriment. He also experimented less successfully with albuminoids, and finds that their use is not free from danger, and that much care should be exercised. Many of the albuminoids appear to be adapted to this use, and especially conglutin in solution.

Lilienfeld thinks that there is a future for this method in desperate cases of inanition, such as that incident upon stricture of the esophagus, bulbar paralysis, etc.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Avian Diphtheria.

In the Bulletin of the Belgian Royal Academy of Medicine (*Internat. Centralbl. für Laryngol.*) Gratia and Lienaux have published a report of an interesting series of experiments in the inoculation of pigeons with diphtheria. As a result of their researches they have arrived at the conclusion that in the bills of pigeons ill with epizootic diphtheria a bacillus is found similar in its morphological peculiarities, in cultures, and in certain chemical reactions, to the Klebs-Loeffler bacillus, although it has a very weak virulence, and they could not inoculate guinea-pigs with it.

On account of a lack of sufficient differential experimentation the authors were as yet unable to determine whether they had a pseudodiphtheritic or an attenuated form of the Klebs-Loeffler. Hence they left the question open, and although their experience led them to the impression that the first hypothesis (of a pseudodiphtheritic bacillus) was probably correct, still at least there was a presumption that the second hypothesis (of a true Klebs-Loeffler) might eventually prove true, and therefore from a hygienic standpoint it would be well to have a care regarding avian affections of this type.

THERAPEUTICS.

The Therapeutic Value of Heroin.

Prof. D. H. Leo, in the *Deutsche Medicinische Wochenschrift* of March 23, 1899, says that in most cases of emphysema and chronic bronchitis evil symptoms appeared as soon as treatment with heroin was discontinued, although in several instances from one to two weeks would frequently elapse before the patient would be again troubled with dyspnea after prolonged use of heroin. In one particular case of bronchial asthma with copious pulmonary secretion an improved condition continued for so long a period that an entire cure might almost be claimed. In some instances the administration of heroin produced great relief simultaneously with increased expectoration, which taken together repeatedly caused most satisfactory results, and on this account he urges a constant use of the preparation.

From the above mentioned facts it may be gathered that heroin

may be considered as an entirely specific cure in cases of emphysema and bronchial maladies preceded by dyspnea.

If it be considered how painful is the continued, as also the spasmodic, form of dyspnea, and how patients are thereby rendered totally unfit for all activity and unable to sleep, the physician often being helpless to mitigate the suffering, we shall readily welcome any means which may be the cause of relief, even though temporary. Pneumatic therapy, nitro-preparation, stramonium, and other remedies are seldom successful, and the author's experience indicates heroin as being superior to them all. First, it never fails, and secondly, it appears to operate more rapidly; while several cases have already been published which support the theory that heroin when administered under favorable conditions is not only productive of an improved condition in the patient, but may even effect an absolute cure of diseases of the bronchial mucous membranes complicated with dyspnea. Such curative action will be readily claimed for heroin if we consider the case cited by Professor Dresser.

It appears highly probable that the catarrhal bronchial mucous membranes are favorably influenced by improved aeration of the lungs, particularly when other remedies be simultaneously administered which produce also a supporting effect in this sense.

With all confidence may the hope be now expressed that heroin will soon assert itself as a lasting and valuable medicament for the treatment of maladies preceded by dyspnea.

Suprarenal Gland Extract as a Hemostatic.

Lermitte, of London (*British Medical Journal*, Feb. 25, 1899), was led to treat hemorrhage by the use of extract of suprarenal gland by studying the prior results of Dor, Velich, and Mullen. Dor found that a single drop of a watery extract of the gland was sufficient to render the bulbar conjunctiva anemic, so that under its use with cocaine iridectomies were performed. Velich found that when a watery extract was dropped into the eye it caused a marked vascular constriction, and thus relieved conjunctival hyperemia; when applied to the blood-vessels of the skin the normal pink disappeared, and when applied to eczematous eruptions, nævi, and even sarcomata, the same vasoconstrictor action was observed. Mullen found that in nasal operations, when used with cocaine, it prevented hemorrhage and increased the anesthesia so much that the cautery could be carried down to the perisoteum with the greatest confidence.

Lermitte determined to carry these results a step farther, and widen the scope of the utility of the extract of suprarenal gland by utilizing it in treating actual hemorrhage. A case presented of a boy six years

of age, who, following an attack of diphtheria, had been subject to severe epistaxis occurring at all hours of the day and night, often without apparent cause, but sometimes following unusual exertion. All sorts of treatment had been tried, but the attacks usually lasted an hour or longer, with great loss of blood, and occurred on an average of three or four a week. Applications of extract of suprarenal gland, five grains in a saturated solution of boric acid, were made on alternate days for three weeks, every third day for three weeks, and then on every fourth day for the same length of time. There have been no attacks of hemorrhage since the first application was made.

Belladonna in Bronchopneumonia.

A. H. Frere (*British Medical Journal*) says that the great value of belladonna in asthma and whooping-cough is well recognized, and when we come to consider the main actions of this drug upon the nervous and vascular systems we find there are many reasons why belladonna should prove of value in bronchopneumonia. As an antispasmodic, as a stimulant to the cardiac muscles, as a stimulant to the vasomotor and respiratory centers, and lastly, as diminishing secretion, it must tend to relax the tubes, to obviate the stasis of the vessels around the bronchi, and facilitate the breathing. He says that he has been accustomed to employ iron in these cases with great benefit, having regard to the fact that this remedy increases the number of blood-corpuscles and the oxygen-carrying power of the same.

Iodothyrine in Arteriosclerosis.

Lancereaux (*La Semaine Médicale*, Jan. 4, 1899) presented a patient before a recent meeting of the Paris Academy of Medicine, in whom the well-defined lesions of arteriosclerosis appeared to recede under the use of iodothyrine in daily doses of thirty to forty-five grains. During the exhibition of this remedy the hard, sinuous condition of the arteries seemed to undergo resolution; the arterial tension was lowered, albuminuria and nocturnal polyuria disappeared, and a general condition of chronic articular rheumatism likewise vanished.

Note on the Treatment of Pertussis.

J. Madison Taylor (*Pediatrics*, April 1, 1899) calls attention to the value of a remedy to relieve and check the force of the paroxysm which can be safely applied by the mother or nurse. This consists of a mixture of amyl nitrite ℥ ss, spts. chloroformi ℥ iij, ether sulph. ℥ v, of which a few drops can be applied on a handkerchief held to the child's nose during the "lock spasm."

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Etiology of a Few Nasal Reflex Neuroses.

Spiess, of Frankfort, in a contribution to the *Archiv für Laryngologie* (Bd. 3, p. 303), reports some observations regarding nasal reflexes. In one asthmatic patient who had certain attacks of coryza, during which the nares were more or less occluded, he observed that during the attacks the patient never had asthmatic seizures. Again, he noticed that the small accumulation of glands on the septum, known as the tuberculum septi, is an especially sensitive point in the nose, that it is capable of swelling, and when swelling occurs may come in direct contact with the middle turbinate; the author saw cases with a decided tendency to sneeze, where the sneezing was stopped by holding the nose firmly closed. Also that the tendency to sneeze was held in abeyance when the patient inspired through the mouth and expired through the nose, so that the air current did not disturb the middle meatus. From this the author concludes that the contact of two mucous surfaces with each other is an important factor in the origination of nasal reflexes; and that such a disturbance may arise from the two surfaces rubbing together, from a third body (polyp, dust) lying between the two, or from the pulling on the two surfaces of a small synechia of fibrous tissue.

For the treatment the chief indication is met by a removal of the friction between two surfaces, and this is best accomplished by surgical means. The author reviews briefly the various operative measures which may be used, and decides against the cautery, especially for the lower turbinate, which he believes to be far less often at fault in nasal obstruction than usually so considered.

On the Relation Between Nasal and Ocular Diseases.

In reviewing an article published by Dr. O. Seifert in *Munchener Medicinische Wochenschrift* (No. 29, 1898), Dr. Scheck states in the *Internationales Centralblatt für Laryngologie*, etc. (No. 3, 1899), that diseases of the eye may arise from a direct extension of a pathologic condition in the nose or may have a reflex origin. The latter phenomena are observed when in manipulations in the nose a secretion of tears is started and also a hyperemia of the cornea; and conversely a sudden access of light to the eye may cause sneezing. More commonly diseases of the nose spread directly. Atrophic processes in the nose, certain hyperplasias of the inferior turbinate, deformities, exostoses,

and adenoid vegetations give rise to disease of the lacrimal canal. In children especially the most varied affections of the nasal cavities may give origin to inflammation of the conjunctiva. Ozena leads occasionally to corneal ulcers, and sometimes may give rise to trachoma. Lupus and tuberculosis may extend through the lacrimal duct to the eye.

Among the ocular affections which may have a reflex origin in the nose are pupillary changes, photophobia, disturbances of accommodation, strabismus, narrowing of the visual field, optic neuritis, asthenopia, blepharospasm, ciliary neurosis. Also by means of the vascular association, according to Ziem and Winckler, diseases of the eyes may occur.

Intratracheal Injections of Creosote Carbonate.

Dr. Bayer, of Brussels, in the *Revue Hebdom. de Laryngol.*, etc. (No. 9, 1899), reports at length upon his success in the use of intratracheal medication in chronic catarrhal bronchitis and in pulmonary tuberculosis accompanied by profuse expectoration. He used a mixture of creosote carbonate and mentholated oil (two to eight drops of the creosote preparation with one-half to one cubic centimeter of four-per-cent mentholated oil). The injections were well borne and had a good effect. He recommends the carbonate of creosote with a bland diluent as being less irritating than other creosote preparations, and less likely to cause coughing and spasm of the glottis. When pure it is a bland liquid of syrupy consistence at ordinary temperatures, and of feeble odor as compared with creosote.

With the aid of a suitable syringe the author injected one-half to one and a half cubic centimeters of the liquid mixture without distress to even very sensitive patients. In chronic bronchitis with profuse expectoration, in bronchiectasis with abundant purulent, foul-smelling sputa, and in some cases in which tubercle bacilli were determined in the sputa, the results were excellent, the expectoration diminishing and body weight increasing.

Results of Operative Treatment for Adenoid Vegetations in the Nasopharynx.

Sendziak, of Warsaw, has published in the *Archiv für Laryngologie* (*Internat. Centralbl. für Laryngol.*, vol. xv, No. 3) the statistics of his cases of this affection. Among 8000 patients he diagnosed adenoids in 718 cases, and of these operated upon 336. His report of the results of his operative work contends that the following points in the way of good results were established:

1. Restoration of the permeability of the nose.
2. More or less decided improvement in the general health.
3. Good influence on the intelligence.
4 Good influence on disturbances of hearing.
5. Beneficial results in the treatment of deaf-mutism.
6. The removal of local pathologic changes in the nose and pharynx.
7. The cure of reflex neuroses.
8. Good effect in supposed pulmonary hemorrhages.
9. Relief of disturbances of speech.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

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Prophylaxis of Ophthalmia Neonatorum.

Jameson (*Medical Record*, March 4, 1899) states that: (1) The absence of external evidence of specific discharge from the birth canal cannot be relied upon as an indication that specific infection does not exist, as infection may be present without external evidence. (2) Reliance upon the condition of the infant's eyes as indicative of a coming attack of gonorrheal conjunctivitis, and consequent postponement of treatment until symptoms appear, are apt to be deceptive, as during the period of incubation the gonococcus may to a certain extent lie dormant, clinical symptoms may be masked, and precipitation of the disease itself may be abrupt. (3) The objections to silver nitrate as a prophylactic and remedial agent do not seem to be clinically sustained; on the contrary, it possesses ideal properties for counteracting this disease. (4) The discrimination between private and hospital patients in the practice of prophylaxis in this manner is thoroughly inconsistent, as the disease is common to both classes. (5) The comparatively small number of cases in individual practice, and the subsequent successful treatment of them, cannot be regarded as a contraindication to the general adoption of careful prophylaxis, as the aggregate number of total and partial blindness resulting from this disease is large. And, finally, what is the best procedure in the practice of prophylaxis of ophthalmia neonatorum? In the writer's opinion it can be divided into three stages—before birth, at the time of birth, after birth. Before birth means should be employed to render the sterilization of the birth canal as complete as possible. At the time of birth the careful cleansing of the infant's eyes with a solution of twenty grains of boracic acid to the ounce should be prac-

ticed, care having been taken to render sterile the surrounding portions of the orbit and also to make use of Crédé's method, viz., the instillation of one drop of a solution of silver nitrate, two grains to the ounce, between the lids and upon the cornea. After birth use some mild cleansing wash, preferably boracic acid, in solution of twenty grains to the ounce, three or four times daily; this should be practiced from five to six days after birth.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

A Case of Metastatic Carcinoma of the Inner Surface of the Cervical Dura and Lower Portion of Brachial Plexus of Left Side.

Abstracted from the *Archiv für Psychiatrie*, etc., the *Wiener Klin. Woch.*, No. 10, 1890, publishes an account of a case observed by Dr. Bruns, of Hanover. The patient was unmarried and sixty years of age; in 1890 he underwent an operation for carcinoma of the left breast. From the beginning of the year 1895 the patient suffered in the region of the lower roots of the brachial plexus, while at the same time there gradually took place in the course of nine months a decided atrophic paralysis of the fingers of the left hand and a portion of the muscles of the hand; at the same time there occurred left-side myosis and narrowing of the cleft of the lids, as well as pain on the ulnar side of the arm. From March to May, 1895, there was a herpetic eruption over the distribution of the left first dorsal and eighth and seventh cervical roots, and after healing the skin of the entire left hand was thinned, parchment-like, red, and shining — typical "glossy skin."

Significant symptoms of the involvement of the cervical vertebræ did not occur. The diagnosis was made of a cancer of the left lateral portions of the two last cervical and two first thoracic vertebræ, with disturbance of the radix cervicalis VII. and VIII. and dorsalis I. The patient died in November, 1897. The vertebral bones were found to be healthy, and only the soft parts, as mentioned, affected.

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ORIGINAL CONTRIBUTIONS.

LEPROSY IS MOST CERTAINLY NOT CONTAGIOUS.

BY ROGER S. CHEW, M.D., M.S.C.,

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With the hypothesis of "propagation of leprosy through want of isolation" (MEDICAL AGE, Feb. 10, 1899, p. 83) as the real burthen of his ambition, I can quite understand Dr. Albert S. Ashmead taking violent umbrage at anything militating against his pet crank for "segregation;" but it is painfully apparent that he has not carefully read my "quite lengthy article" in your issue of December 27, 1898, in which I carefully defined "contagion" as distinguished from inoculation and heredity, which accounted for 272 lepers in 1034 cases I there analyzed of lepers that came under my notice in the 14¾ years 1877 to 1891, else he would not have dashed off a far more lengthy article, in which he tries to disprove my contention of non-contagion by quoting a long list of cases that are due *not* to contagion, but to heredity or inoculation; and his declaration, "I do not care about the distinction between contagion and infection, although we are well aware of the difference which science sees between these two terms. It is enough for us that leprosy is transmitted by whatever means, among these means being contagion, inoculation, and infection," on page 90, plainly tells us that he is not open to conviction and is perfectly apathetic to the etiology of lepra in the living subject, though he is keenly alive to tracing it in pre-Columbian Peruvian vases, in which it is impossible to differentiate the syphilitic from the leprotic models.

I have been studying leprosy since 1877, which up to the 10th of March closed twenty-two years since I began the study. When Dr. Ashmead wrote me in 1895 or 1896 asking whether I would give evidence before the Berlin Lepra Conference if I were invited, I told him I would, and sent him a copy of my brochure "Leprosy and Vaccination" (*Calcutta City Press*, Oct. 13, 1891), on page 12 of which it is distinctly stated that between 1877 and 1891 (*i.e.*, 14.75 years) I had dealt with the 1034 cases of leprosy comprising the analysis published in your issue of December 27, 1898. Between the publication of this brochure and the receipt by me of Dr. Ashmead's letter I had treated forty-nine cases more (this number has now increased to 201 in the new series, a complete total of 1335 in twenty-two years), so that there is nothing inconsistent (as Dr. Ashmead appears to imply there is) in my statement to him that in my "over sixteen years of study of leprosy" (*i.e.*, 1877 to 1895) I had seen 1083 cases of leprosy, in none of whom I could determine contagion as the cause.

I have no wish to disparage or ridicule them; but what guarantee does Dr. Ashmead offer that the evidence tendered by the "representatives of twenty-two governments" before the Berlin Lepra Conference has not been obtained from State leproseries or asylums, or from districts in which, as in the Sandwich group, leprosy is *endemic*, or that it is any more to be relied on than that tendered by the Prince of Wales' 1890–91 Leprosy Commission, and which the medical profession refuses to accept as conclusive or convincing?

As a staunch American (I might safely say) and a very bigoted one, I cannot be accused of posing as John Bull's apologist; but as I have a very long experience of India, where things are very different indeed to what Dr. Ashmead seems to think they are, I would really like to know — and so would scores besides myself — wherein lie the "immense interests in British India" which *impelled* the British Government to be the only one to oppose the Berlin Lepra Conference's contagion conclusion, and in what manner this standing up for non-contagion would benefit the British Government if leprosy were really contagious. Were my learned antagonist to favor India with a visit of personal inquiry *in corpore suo*, instead of depending so much as he apparently does on ancient screeds, he would find to his lasting surprise that modern India, as she really is, is a totally different country to what the large Christian countries are *allowed* to see India as, and that the India of 1857 and 1869 is as like the India of 1894 up as chalk is to cheese.

I have no wish to engage in a literary war; but as there are certain inaccuracies that have crept into Dr. Ashmead's rendering of Dr. D. Enrique Robelin's "La Lepra es Contagiosa" (*quare*), and which

should not in the interests of science be allowed to pass unnoticed, I shall with your permission first call attention to the fact that leprosy, tuberculosis, and syphilis are as closely related to each other in external manifestations and visual appearance as are bromine, chlorine, and iodine in their reactions, and after submitting that it is well understood and widely known among dermatologists that telluric and other external conditions and influences in a country where any affection is endemic often deceive the casual inquirer into believing contagion or infection to be the cause of its manifestation in a particular subject, I will show that the long array of cases and opinions quoted by Dr. Robelin through Dr. Ashmead's pen, on pages 81 to 93 of your issue of February 10, 1899, go to prove rather than disprove my contention that leprosy is *not* contagious, though it is and may be transmitted by inoculation, heredity, and a host of other causes except infection and contagion.

I quite admit that a microbe which Hausen declares is the specific bacillus of leprosy has been found in the tissues of advanced lepers; but this microorganism, which savors suspiciously of the life-history and movements of the bacillus tuberculosis, has never been found in the earlier stages of lepra, and even as the food supply to the pupæ hatched from eggs obtained in a continuous laying from one and the same mother-bee or queen-ant develops a large variety of matured insects as different from each other in shape and life-mission as they are from their (common) parent, so also there is no positive proof that the B. lepra and B. tuberculosis are not identical in source though slightly altered in appearance by the nutrient pabulum furnished them by their victim. But there is ample evidence that the virus of lepra, like the virus of syphilis (no bacillus yet found), will engender a disease *sui generis* if instilled into a living body through a cut, abrasion, puncture, or any other non-contiguity of surface—whether mucous or cutaneous or the result of inflammation—that will convey the virus directly to the blood-stream, and this particularly so if that body or subject is at the time of such inoculation in a febrile or other condition in which the phagocytes are too busily engaged in other repairs to be able to spare a sufficient force to resist the new invader, which they might easily do if the new enemy were a living bacillus instead of a corroding liquid which can overpower the overworked phagocyte.

It is no argument to contend that because Verteuil favors isolation (page 83) he must necessarily disbelieve his honest belief in non-contagion. His long experience tells him how prolific lepers are and how they are afflicted with an insatiable sexual hunger. He knows that they are men and women whose natural passions and sentiments

of anger, etc., have been aggravated fearfully by disease, and that a blow or bite from any one of them will cause the non-contiguity of surface necessary to inoculation. He knows that isolation — meaning separation of the sexes—precludes the possibility of procreation, and therefore, so I presume, advocates segregation with a view to utterly prevent the transmission per heredity of lepra. He hints as much in his letter to Leloir, and to make it more definite he says leprosy is "not contagious from man to man."

The cases reported by Bemiss, Tache, Hayd, Grönvold, Hausen, Manson, Leloir, Planck, Manget, Carter, Vidal, Dahl, Arning, and the host of others are purely due to *inoculation*, and while Sir Erasmus Wilson, who advocates the endemic theory, *never* contradicted or changed his views by reporting (page 85) a case of leprosy as due to contagion, there is nothing to show that Father Damien and the other Molokai cases were *not* due to accidental inoculation; and against Dr. Bemiss' plea (page 84) for dissemination by contagion in the Honolulu Leprosery (*i.e.*, in the center of a district where leprosy is endemic) we have the Calcutta Leper Asylum, whose superintendent, a time-expired soldier, has for the past twenty years and more daily visited and touched the hundreds of lepers in *all* stages who have from time to time lived there, without contracting their disease, which contagion has not communicated within these *thirty* years to the cooks and menials of the establishment, who think nothing of sitting down to dine with these leper inmates; and the assistant surgeon has for many years dressed their wounds and ulcers without contracting their loathsome disease. A similar immunity is reported from the eighty-five other asylums, official and private, that exist in other parts of India.

Dr. Friedel, of China, thinks that the disease is communicated by *inoculation* during coitus, and any one who notices the engorged state of the glans, with every pore distended to its utmost as it chafes the vaginal rugæ during the procreative act, can understand how the temporary inflammation caused by the friction of the generative organs against each other while fulfilling their natural functions would render both the male and female in a state fit for inoculation by each other if the slightest scratch or abrasion in these *tender* parts occur during the coitus; or the leprous semen may be drifted onwards to fecundate the healthy ovum and result in the birth of a child who may not evince the disease till puberty—that age when the greatest changes take place; or its leprous body may during the process of parturition inoculate the mother through the denuded uterine surface or perineal or cervical tears. And yet some of my learned *confrères* call this contagion, when common sense declares that all diseases transmitted during coitus are inoculated.

Could Doña Chucha (page 88) not have inoculated herself through an abrasion or cut received while washing the young man's lepra-pus and discharge-saturated clothes? And what proof is there that Angel Mendez was not similarly inoculated through a wound while touching his leprous relatives?

"The microbic diseases are all contagious" (page 92) because all the germs are easily received in our organism. Good! Cholera, a microbe disease, is infectious; rub such microbe-laden discharge over your hands—*nothing* happens. But if you have a cut or scratch on them through which the microbe enters the blood-current direct, there is a risk not of cholera but of septicemia (*vide* Koch's experiments and the failure of the anticholera inoculations). Wear a cholera patient's clothes, or drink or eat anything tainted with cholera virus, and you run the risk of cholera, whose starting-point is the stomach, into which the germs given off by the clothes are drawn by the breath into the throat cavity and thence washed into the stomach during some subsequent act of swallowing, conveyed direct by the contaminated food or drink; but it is certainly not conveyed into the system through the lungs, since the cholera vibrione *cannot* exist in the presence of oxygen. I would call this *infectious*, not contagious. Leprosy virus, on the other hand, cannot be conveyed to the system through the stomach nor absorbed into it through the unbroken integument or unabraded mucous surfaces, as smallpox can, though it can be conveyed through a wound that connects with the blood-stream; it is therefore non-contagious and non-infectious, though it can be inoculated. But if in spite of these facts my learned friends Drs. Ashmead and Robelin persist in saying that leprosy is contagious, infectious, and inoculable, will they also call syphilis infectious, or cholera inoculable?

Facts speak for themselves, and I maintain, and every rational man with me, that leprosy is *not* contagious.

PRECOCIOUS CEREBRAL SYPHILIS.

BY W. F. WEGGE, M.D., MILWAUKEE,

Professor of Nervous and Mental Diseases and of Physical Diagnosis, Milwaukee Medical College.

J. M——, aged twenty-two, a tinner by trade, called at my office on January 14, 1896, to consult me on account of a sore situated on the foreskin of the penis, which he had first noticed about two weeks previously. He admitted the possibility of a syphilitic infection. The base of the sore was hard, and the inguinal glands of the left side were enlarged, but not tender. No other evidence of syphilis was

present at the time. He next called on me about two weeks later, when he presented a typical macular eruption situated principally upon the abdomen and chest. There was a slight elevation of temperature, and he complained of a rather ill-defined, dull headache. He was put on antisyphilitic treatment ($\frac{1}{24}$ grain bichloride of mercury three times a day) at once, and in the course of about two weeks the eruption disappeared. Although the patient was instructed to cleanse his mouth thoroughly with a solution of potassium chlorate each day, he developed a very severe mercurial stomatitis in the course of ten days after the beginning of the treatment, which made it necessary to interrupt the treatment. The patient was kept under observation and treatment for his stomatitis for some time, and finally failed to report.

About eight weeks after the beginning of the treatment, or about twelve weeks after the appearance of the chancre, the patient called again at the office, and made the following report: He had recovered from the stomatitis, and had been feeling pretty well until four days previously, when he noticed that objects appeared blurred to him, so that it became impossible to do his work properly. He left the place where he was employed to go to his boarding-house. On the way he experienced considerable nausea, was dizzy, and vomited after arriving at his destination. He went to bed, and remained there until he came to the office, when he complained of a dull headache, a sensation of dizziness, diplopia, and nausea.

On examination there was found a slight ptosis of the left upper lid, and a weakness of the internal rectus of the left eye. His pulse was 64. His temperature was not taken. With a knowledge of the patient's previous history, antisyphilitic treatment (this time in the form of mercurial inunctions, one drachm of the 35-per-cent ointment each day) was resumed at once. In a little over a week all of the symptoms had disappeared, and there has been no return of the trouble since.

Cerebral syphilis is by no means a rare disease, as every one who has followed the study and treatment of nervous diseases for any length of time has abundant opportunity to observe. The great importance of the subject has led many investigators to choose this field, and as a result its literature has become quite voluminous. As a direct result of these investigations, many have found it impossible to longer adhere to the classification of syphilis (established by Ricord) into three stages—*i. e.*, the primary, the secondary, and the tertiary—excepting as a matter of convenience in didactic instruction. According to Ricord the changes occurring in the brain, its blood-vessels and its membranes, as a result of syphilitic disease, occur during the tertiary stage.

The discovery that these changes may occur during the secondary stage, and, according to some authorities, even during the continuance of the primary symptoms, has led to an investigation into the changes occurring in other organs of the body during the early stages of syphilis, and also has led to a change in the views held in relation to the occurrence of three distinct stages in this disease.

The symptoms of cerebral syphilis put in their appearance most frequently between one and ten years after the primary infection, but have, in some cases, developed after eighteen to twenty and even thirty years. The reported cases in which they have developed very shortly after the beginning of the syphilis are as yet not very numerous, but they are sufficiently authentic to preclude any doubt as to the correctness of the diagnoses. Schmit has reported a case in which hemiplegia developed six months after infection. The case proved fatal from a second hemiplegia which occurred three months later. On post-mortem examination there was found extensive syphilitic endarteritis of the cerebral arteries.

Brasch reported a case in which the first symptoms (a facial paralysis) occurred within a month after the infection. He expresses some doubts as to the syphilitic nature of this paralysis. However, within three and one-half months there developed tremor, vertigo, and loss of patellar reflexes. The case terminated fatally, with symptoms of bulbar paralysis, within fifteen months. Death was found to be due to vascular disease—endarteritis syphilitica—resulting in numerous patches of softening of brain tissue.

Jolly found the same condition in a case that died twenty-six months after infection.

Baumgarten has shown that syphilitic diseases of the arteries occur during the early stages, and consist primarily of a proliferation of the endothelial cells.

Owing to the fact that a large proportion of the cases of early syphilis of the brain recover, the reports of cases without a fatal termination are much more numerous than those in which the positive post-mortem proof could be submitted. Among those who have been particularly active in establishing the fact that early syphilis of the brain does occur are Naunyn, Heubner, Rumpf, Gowers, Althaus, Hutchinson, and Gajkiewicz.

Norbury has described a case occurring during the continuance of primary symptoms. The symptoms given are: nearly healed chancre, general enlargement of glands, mucous patches in the mouth, and a pustular inflammation on the forehead. The cerebral symptoms were: insomnia, headache, followed by somnolence and later by a somnambulistic state. The patient had contracted syphilis three months

previously. He was under treatment for syphilis and had been for some time. Fournier and Kowalewsky have reported a number of cases of early syphilitic epilepsies, occurring during the secondary stage. The causes of the early development of cerebral syphilis are quite uncertain. Althaus considers youthful age, hereditary tendency, injuries to the head, psychic traumata, sexual and alcoholic excesses as predisposing particularly to early development of syphilis of the central nervous system. Brasch believes that insufficient treatment tended to lead to the same result in his case.

In my case the youthful age and the necessary interruption of the treatment may have had something to do with the early appearance of cerebral symptoms. Of the other predisposing causes mentioned none were present.

Lewin has called attention to the fact that mercury frequently causes cerebral symptoms, such as vertigo, syncope, etc., no matter in what form or manner it may be used, and intimates that at least some of the cases supposed to be early cerebral syphilis may simply be cases in which mercury has produced this peculiar effect.

I believe that in this case mercury has had nothing to do with producing the symptoms, because none had been used for about six weeks prior to the onset of the symptoms, and because the symptoms disappeared promptly after the use of mercury was resumed. Again, the presence of ptosis and of diplopia would lead me to believe that changes of an organic nature must have occurred somewhere in the course of the left oculomotor nerve.

The cases of early cerebral syphilis in which it was possible to make a post-mortem diagnosis have presented changes in the blood-vessels of the brain chiefly, together with changes of nutrition necessarily resulting therefrom. Gummatous infiltration of the coverings of the brain has been comparatively slight.

From this it might be assumed that arterial disease is the rule in early cerebral syphilis. I do not believe that this necessarily follows.

The prognosis of syphilis of the arteries is notoriously bad, many cases defying all specific treatment; that of gummatous infiltration is relatively good; proper treatment usually being followed by absorption. As a result the latter cases rarely present an opportunity for post-mortem examination.

The character of the symptoms, together with the promptness with which recovery took place in my case, would lead me to believe that the diseased process was one of gummatous infiltration of the meninges.

LIVING BEYOND A CENTURY.

BY WILLIAM KINNEAR.

No one really wants to die. It is not necessary to expatiate on the delights of living to any person in even passable health. People in bitter disgrace, or disappointment, profound misery, or keen agony, often throw away their lives, but in all such cases there is a mixture of motives that may be called insanity in the peculiar sort of passion which drags down the unfortunate victim. Whether heredity has anything to do with longevity or not, it seems to be shown by statistics that centenarians and such as live to an extreme age usually inherit this quality from the mother and her mother rather than from the male line of ancestors.

In an address on "Old Age" by Sir James Crichton-Browne, M.D., F.R.S., published in the *British Medical Journal* of October 3, 1891, he states that "Flourons's conclusion that man is entitled to a hundred years of existence was, it must be maintained, substantially correct. Buffon thought that the duration of life was six or seven times the period of growth. Hufeland thought it eight times. It is probably about five times." The longer the time of growth the longer the life, seems to be the rule with man and all other animal bodies. The real reason why one so often hears people say that they do not desire to live to the age of ninety or one hundred years is that they associate extreme old age with all the infirmities of the most feeble specimens of the human race. But to quote Sir James Browne again: "In the good days coming, when sanitary wisdom shall prevail, numbers of our species may be able to count on a round one hundred years of wholesome, happy life, and an old age, tranquil and interesting, unmarred by the morbid accessories which are now generally attached to it." Let us hope so.

As to the class of people most likely to reach the century limit, it is generally admitted that athletes are not usually long livers. Nervous energy and a determined will are no fair equivalents for a naturally feeble physique, and many young fellows of this class, by competing with those much their superiors in physical endurance and strength, ruin themselves for life. It is the heart, the lungs, and the arteries that suffer most in this strain, and not the muscles. After years show the dangerous effects of early folly in this respect. Overtaxing a body not intended by nature for such contests shows its bad results in old age. In all centenarians whose bodies have undergone post-mortem examination, it is remarkable how healthy the arteries seem to have been. During life even this can be easily determined by

examination. Old age is thought by many writers of the medical profession to show itself in the arteries as one of the earliest warnings in the form of degenerative changes. If they are soft and compressible the fact indicates that there has been but little deterioration, as a knotty condition of the arteries shows calcareous degeneration; and morbid changes in the arterial coats give symptoms of disease. Loss of elasticity and thickening in these, and calcareous deposits, interfere with the blood currents, and thus of course bring impaired nutritive conditions in the various tissues.

Scientific investigation until quite recently has been rather limited to the formative period — the years of early youth and manhood. Human bodies after they get to be one hundred or more years of age seem to have been regarded as *verd antique*, curious, but not of particular interest to those busy making and spending money. Longevity is not for the nervous spendthrift — the prodigal of passion. Natural genius which has been highly cultivated and refined by a certain form of education has a tendency to develop a morbid sort of excess, a greater sensitiveness in the nervous system and the tissues generally. Usually irritability and susceptibility accompany genius, though many people who have never been accused of the latter have been well known to have an excess of the former. Necessarily the excessive drafts made upon the system retard recuperative and reparative work of the exhausted organs. Genius loves more exquisitely than the more common human being, and thus suffers more extremely also. As long livers poets have not been a success. Chatterton killed himself at eighteen, Keats died at twenty-four, Shelley was drowned at twenty-nine. Burns, Byron, and Edgar Poe all died between thirty-six and forty years of age. Rogers, it is true, lived to ninety-three, but then he was rather more of a banker than a poet, so we need not count him.

After people have reached extreme old age, the question frequently arises, What shall we do with them? The late James Payn, an English novelist, in commenting on an article of mine in the *North American Review* for June, 1893, seemed to think long life a dreadful bore. "Even as it is," he says, "old age is shown the cold shoulder by all employers of labor. A man could publish his Recollections three or four times, but the reviewers would not stand them beyond that." I believe Mr. Payn died before he reached even his own limit — three score and ten. It must be also admitted that a great many centenarians are now only found in the poorhouse.

Dr. Ainslie Hollis in a recent number of the London *Lancet* insists that not only is life longer than it used to be, but that old age comes later, and youth and manhood have a better race. Dr. Hollis tells us

that middle life has now shifted to fifty instead of thirty-five, and is apparently likely to rise still higher. Formerly the longest livers were the laborers and those of the poor ignorant class who spent much time in the open air. Now even the poets live long. Victor Hugo reached eighty-three, Goethe eighty-three. Whittier, Tennyson, and Holmes died at eighty-three or eighty-four. It is a strange fact that the clergy live longer than any other class of professionals; and we all know how earnestly they desire that other and better world "where congregations ne'er break up and Sabbaths never end." This is truly saddening. Physicians having to sacrifice themselves for the good of the public seldom have time to become centenarians—at least that is the explanation they give to the lawyers and newspaper men. When the advancing improvements of science shall enable one to cultivate longevity as a fine art, to be beyond a century will confer a certain sort of distinction provided we shall be able to use tongue and pen and keep out of the poorhouse. The penalty of attempting to outlive our fellow citizens is that it subjects one to personal and often harsh criticism. The "brother in black" feels this keenly, and we often hear people say, "Oh, I don't believe these old niggers know half the time when they were born." Most of the old people we read of in the daily papers are of Irish origin and have their proofs of birth.

People of one hundred years and over show generally little or no trace of gout and rheumatic affections of the joints of the hands, which give a fair indication of the tendency to disease in other parts of the body. Contrary to the general belief, the bodies of those who live to a hundred years or more are not so prone to disease as those of younger people who only reach middle life. Special maladies are rare among them. They merely waste away and die painlessly. One of the many felicities of those who cultivate a system of longevity is to stroll through cemeteries and stop occasionally to read the epitaphs of those people who doubted their claims to the high honors they have lived so long to enjoy.

As to climate, it undoubtedly has much to do with long life. Regions exempt from sudden changes of temperature, and where one can live much in the open air, are best for those who desire to live long. Standing on the shores of the bay of San Diego, Cal., Professor Agassiz exclaimed: "I have seen many lands; this is one of the favored spots of earth." And General Greeley, of the Weather Bureau, in an article describing the qualities that may be said to constitute an ideal climate, adds: "There is possibly one place in the United States where such conditions exist, a bit of country of about forty square miles at the southwestern part of California, in which San Diego is situated." Outdoor exercise is indispensable if one expects to live long. No

substitute can be offered. All reports of centenarians fully support the belief that the ability to take and enjoy exercise out in the clear, clean, fresh air contributes very largely to daily good health and also to long life. It has been truly said "a man is just as old as his arteries." If they are soft and compressible the deteriorating effects of old age have not appeared. According to Flourons and Cuvier man is of the frugivorous or fruit- and nut-eating class of animals, like the gorillas and other apes and monkeys. Man has not teeth like lions and carnivorous beasts, neither has he teeth like cows and herbivorous ones. Vegetarianism has not yet, however, produced any centenarians. They all eat meat occasionally.

Sir Geo. M. Humphrey, M.D., F.R.S., in writing of the diseases of centenarians whom he had investigated, seems to think their brain affections and the recoveries from them one of the most remarkable of their peculiarities. In an aged person the brain is progressively shrinking, and the interspace between it and the skull caused by the shrinkage is being filled by fluid effusions in the subarachnoid or pia mater tissue, and there may be temporary irregularities and imperfections in this compensating adjustment of the pressure of fluid on the surface and of the blood circulation in the interior, which would account for cerebral attacks and also for the recoveries from them. All Dr. Humphrey's choicest specimens of centenarians, he tells us, were small meat eaters—some did not use it at all.

However, as students of longevity it is not desirable to insist on a strict fruit and vegetable diet. Adam and Eve, we are told, tried it a long time ago and—but to return to our centenarians. It surprises most people who investigate the subject to find that women exceed men as long livers. A census of centenarians taken in France in 1895 gives 213 persons of one hundred years and over—one woman was 150 years old—of whom 147 were women and 66 men. Our census of 1890 gives 3981 persons of one hundred years of age or over, of whom 1398 were men and 2583 women. From these facts it will be seen that the frailer sex live longer than we do. Cheerful and contented people always live longer than the irritable and fretful. But then it may be said that they are usually just so discontented because of bad health, or early excesses—perhaps also frequently from a sort of pig-headed disregard of the commonest rules and laws of health. Of course an inherited bad constitution to begin with must be taken into consideration in many cases. Sound centenarians cannot be made out of bad material. When one gets up to one hundred years of age he often thinks that he can treat his splendid physique with careless indifference. As he has had no particular cares or trouble in living so long he thinks he can do anything with impunity.

Old age is curtailed of many pleasures; no one can deny that. But then it also escapes many annoyances to which younger people are subject. Optimistic philosophy of the centenarians is largely based on the good old principle of taking things as they come. If you have made proper use of your early years, and have not indulged in prodigal and riotous living, you may look forward to a fine wholesome age. What is called morality, though in a measure an artificial product of advanced civilization, in reality carries out a great law of Nature when it teaches that vice is always punished. In this way: Any physical excesses involving excitement of the passions always bring a reaction and depression. Every young fellow knows this from his first experience. Law of Nature as it is, if he dare to disregard it he will most surely be punished whether he ever heard of morality or not. Excesses are paid for by languor and a dull satiety. The more exquisite the enjoyment the more excessive the reaction. As the "fast" man and woman know, a large "vice" always presents a big bill for a huge headache, if not anything else more serious.

In order to live long and healthy lives we can all learn much from a study of the habits of those fortunate individuals who have achieved a century or more—and lived free from disease also. Official tables collected in England recently seem to prove that long-lived families are more likely to produce centenarians than any others. One of the English writers on longevity seems to be somewhat saddened by the fact that these lucky people "born in the purple chamber," as it were, did not intermarry with other long-lived families, and thus test the rule—if it really be a rule.

When we calmly consider the various modes of killing off people nowadays, such as railways, steamboats, elevators, folding-beds, electric lights, dynamite, etc., to say nothing of patent military machines for wholesale murder, it is really a wonder that there are any centenarians left us at all.

That there are certain physical indications which give clues to longevity in many cases may be accepted as facts. It is believed that a large heart, large lungs, large brain and digestive powers, as well as large sexual organs, indicate long life. Post-mortem examinations of men who have reached over a hundred years of existence show this in all cases. Good lungs are shown by wide-open, full nostrils. Small, pinched nostrils are nearly always signs of weak lung power. A person who appears tall in sitting and short and rather thickset in standing is more apt to live long, being endowed with a long trunk and short legs and arms. To all these general rules, of course, there are many recorded exceptions.

SALPINGO-OOPHORECTOMY; DIAGNOSIS OBSCURED BY UTERUS BICORNIS UNICOLLIS.

BY ALEXANDER MACMILLAN, M.D., DETROIT, MICH.

After careful observation and examination the surgeon is often unable to make a complete diagnosis till the operation is in progress, and even then a tardy diagnosis sometimes delays the operation and gives results either inferior or unfortunate.

The case of Mrs. McP—— presents a difficulty in diagnosis so unusual that I consider it of sufficient interest to be reported. The patient was twenty-eight years of age, her oldest and only child ten years. She had one miscarriage two years previous to date of operation. Her catamenia and confinement were unattended with anything indicative of abnormality. On July 18, 1897, there were symptoms of acute pyosalpinx. Temperature was 102°, pulse 100; there was constipation, and painful and frequent micturition. Vaginal examination revealed a purulent discharge from the os uteri, tenderness of all the pelvic organs, uterus immovable and displaced to the right, and to the left a large tumor tender and fixed.

On the 22d I had the patient removed to Harper Hospital, and operated. Upon opening the peritoneal cavity the fundus uteri was found to the right; the right tube and ovary were normal and sound; the left ovary and tube were entirely obscured by intestinal vesical and uterine adhesions. After some vain efforts at disentanglement, I decided to concentrate my efforts that I might if possible isolate the uterine end of the tube or ligament. This proved the most baffling portion of the whole mass. I found myself entirely unable to feel, much less to see, the convex left surface of the body of the uterus. If the patient had given a history of prolonged trouble I should have suspected a neoplasm, or an intramural pregnancy, but the history of the case excluded such conditions. The difficulty of the diagnosis consisted in the impossibility of finding any line of demarkation between the uterus and the tube and ovary.

While separating the vesical adhesions a quantity of purulent fluid poured out of the mass, evidently from the ruptured tube, and thereafter I was able to detect a solid body in the midst of the adhesions, which when isolated proved to be the left cornu of a uterus bicornis unicollis. The remaining steps of the operation presented nothing of interest. The patient made a speedy and uninterrupted recovery.

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EDITORIAL ARTICLES.

A REACTIONARY OPINION.

Dr. Granville Bantock is well known on both sides of the Atlantic, and is sufficiently eminent in certain branches of medical science to cause his opinion in matters with which he may not be very familiar to receive an attention they might not merit. In a recent address before the British Gynecological Society he assailed the modern philosophy of disease in denying the specific influence of pathogenic microorganisms. He combated the accepted doctrine in proposing the only opposite one, that bacilli are found in association with the disease because of the disease; or, in other words, that the disease furnishes the conditions necessary for the presence of the special microorganisms.

In support of his doctrine Dr. Bantock alluded to the normal findings in the vaginal discharges of healthy women. More than thirty different species of microorganisms had been isolated from the female genital tract or from discharges. "The most frequently present is the staphylococcus pyogenes aureus, which is the commonest of the suppurative bacteria." This, he considered, indicated a normal physiological tolerance for the presence of these microorganisms. He next alluded to certain facts in connection with the treatment of wounds spoken of by Dr. George Stokes, who had had under his care a patient with ulcers involving the instep of each foot. These ulcers were almost precisely alike in form and extent, so he treated one with corrosive sublimate solution and the other with oxygen gas. In a short time a difference appeared in the two ulcers. The one treated with sublimate presented an ashy-gray appearance and exhibited very little sign of healing, but was found on examination to be sterile, while the other ulcer treated with oxygen gas gave a copious crop of bacteria, the most prominent microorganism being the streptococcus pyogenes. This ulcer, however, was found to be healing in a rapid manner, indicating that the bacteria were not the prime cause of the destructive

process, but were playing the beneficent part of scavengers in the economy of nature.

Dr. Bantock next alluded to diphtheria, and he endeavored to show that Loeffler's bacillus is not a constant, and therefore cannot be the essential element in the production of an attack of diphtheria. The Loeffler bacillus is frequently present in some of the exanthemata and also in healthy persons. A still more striking example is afforded in cases of tonsillotomy, wherein, upon the excised surface, a grayish membrane is formed in which the bacilli abound without constitutional disturbance or any sign of diphtheria.

The next denial was that of the gonococcus being the prime agent in the production of gonorrhea. Numerous observations are on record of cases of gonorrhea without gonococci, and it is now well known "that the gonococci diminish in number as the disease becomes chronic"—that is to say, as the food on which they live diminishes in quantity. Dr. Bantock then showed that in the diseases about which we know the most, like smallpox and syphilis, no one has ever discovered the bacillus to whose influence the disease could be attributed. All the phagocyte theory was condemned and regarded with Professor Buchner as "a fable." So also the bacillus typhosus was not the cause of typhoid fever, nor can the comma bacillus be regarded as the essential element in the production of an attack of cholera.

All these things Dr. Bantock regarded as facts which go to show that the modern doctrine of bacteriology is a gigantic mistake, that we are already at the parting of the ways, and that it is soon to become recognized that these various bacteria play a beneficent rôle in the economy of Nature.

Dr. Bantock's convictions were stated with a vigor which undoubtedly lends more emphasis to his conclusions than his reasons for them justify. It would be a grave calamity were students and those of immature experience to gain belief in the so-called "beneficent rôle" of microbes, and it is devoutly to be hoped that the candid expression of Dr. Bantock's heretical opinions will have no further effect than that of consolidating conviction in the very doctrines against which he argues so strenuously.

EDITORIAL NOTES.

White Men Can Live in the Tropics.

Mr. Albert Russell Wallace considers as a myth the current idea that white men cannot live in good health in the tropics. There is, he considers, no trouble with the climate, and the cause of all diseases is

simply the unsanitary conditions which exist, similar to those which prevailed in Europe a century ago. The malarial fevers he considers to be due to ignorant dealing with the soil. His own experience tells him that swamps and marshes near the equator are healthy so long as they are left in a state of nature. It is only when they are cleared for cultivation that they become deadly. He considers that there is a large part of the world from twelve to fifteen degrees north and south of the equator which is well adapted for colonization in the true sense —that is, for permanent occupation by white men—and with sanitary precautions he considers it may be made the most healthy and enjoyable part of the world, and that in which the laborer can obtain the maximum return with the minimum of toil. He says it is a well known fact that in Ceylon and in India the men who enjoy the best health are the enthusiastic sportsmen, who seize every opportunity of getting away from civilization, and who often submit to much privation and fatigue with benefit rather than injury to their health. At a period when we are apt to be disheartened with the burdens of colonization, it is encouraging to hear the voice of some believer in the healthiness of the tropics give expression to his views.

A Change of Alimentation.

A curious social revolution is occurring in France owing to the gradual change in one of the fixed conditions of alimentation. During the last twenty years the consumption of rice has increased from thirty-four millions to sixty-eight millions of kilogrammes. As compared with wheat, the price of rice has relatively much diminished. These facts are likely to have certain points of great hygienic interest. The calorific properties of rice are slightly greater than those of wheat, 100 grammes of wheat giving 350 calories, and 100 grammes of rice giving 353. It is not likely that any grave inconvenience is likely to follow the substitution of rice for wheat in alimentation. Observations, however, concerning such a radical change of diet will be of great interest.

A Sanitary City.

The death-rate of London was in 1897 only 17.7 per cent in a population of 6,291,667. When it is remembered that this means 9000 people to the square mile, it will be realized that the sanitary problems connected with overcrowding must have been presented in their extreme forms. London may fairly claim to be the healthiest large city in the world, and England, by the example of London alone, deserves the name of being the birthplace and home of sanitary science.

ITEMS AND NOTES.

CLEVELAND has a German medical society.

NEW YORK is to have a school for public health.

AN antiexpectoration ordinance is being enforced in Newark, N. J.

JAPAN and Portugal have made vaccination and revaccination compulsory.

THE daily press announces that Bra of Paris has discovered the parasite of cancer.

THE next balneological congress will be held in Frankfort-on-the-Main, in March, 1900.

GOVERNOR ROOSEVELT, of New York, has signed a bill prohibiting six-day bicycle contests.

THE suicide is reported of a French centenarian who took his life because he was afraid he would live forever.

THE sum of $100,000 has been appropriated by the New York Legislature for the Craig colony of epileptics.

NEW YORK is proposing to imitate some European cities in having a physician in attendance at every performance of every theater.

ABOUT 84,000 fewer persons have died from tuberculosis in Prussia between the years 1889 and 1897 than in the preceding ten years.

THE first international congress of physicians connected with life insurance companies will be held at Brussels, Belgium, September 25 to 30, 1899.

DR. S. WEIR MITCHELL, during his recent visit to Constantinople, professionally attended the wife of Tewfik Pasha, Turkish Minister of Foreign Affairs.

AMONG the other international congresses to be held at Paris during the Exposition next year there will be one on British Medicine and Medical Deontology.

THE Alma Sanitarium has passed into the proprietorship of its popular superintendent, Dr. E. S. Pettijohn. This will insure for the institution a continuance of the confidence and patronage of the medical profession.

THE numerous monasteries in Russia are to be turned into sanatoria for consumptives. The majority of the monasteries are situated in healthy regions and have spacious rooms, and are able to supply fresh milk, eggs, etc.

JOHN PHILIP SOUSA has made a contract to compose a March for $5000 to bear the name of a medical article, and to be used in its exploitation. Are we to expect the antitoxin march, the kidneys on parade, and *id genus omne?*

IN Hayti and in Mexico syphilitic rashes are exposed throughout the day to the sunlight, the course of treatment lasting generally about one month. The sun bath is also employed in Europe for the treatment of various skin eruptions.

THERE appeared recently in the village of Annam, where Yersin's Plague Serum Laboratory is located, what was at first supposed to be another case of laboratory contagion, but later investigations traced it to a village on the coast where the Chinese junks land.

A WHISTLE, one inch in length and one-quarter inch in thickness, located by the *x*-ray process in the stomach of a three-year-old child, was successfully removed by surgical operation at the Emergency Hospital, Washington. The child is recovering rapidly.

THE brain of Professor Helmholz was recently examined by Hausmann, of Berlin, and its weight was found to be 1440 grammes. The frontal lobes were unusually well developed and had an extraordinary number of convolutions. The normal brain weighs on an average 1358 grammes.

THE Austrian Government has refused, says the *Journal of the American Medical Association*, the petition of some of the smaller towns for a medical college with the statement that each student in the smaller universities costs the State 1000 gulden annually. It is suggested that it would be much cheaper to support the students from the smaller towns at the larger universities, such as Vienna, Prague, and Graz.

ACCORDING to press despatches from Washington, D. C., the President has signed an order transferring to the Surgeon-General of the Marine Hospital Service about 10,000 acres, with the present buildings, at the old Fort Stanton military reservation in Lincoln county, N. M., fifty miles east of Laguna station on the Santa Fé railroad, for the establishment of a hospital for consumptives in the army, navy, or marine corps, revenue marine, and other branches of the service.

At a recent meeting of the Council of the University of the City of New York a resolution was adopted extending the congratulations of the Council to the Dean of the Faculty of Medicine, Dr. E. G. Janeway, and his associate in the faculty, Dr. Theodore Dunham, "upon the success which has attended their efforts to save to the cause of letters and of mankind the life of Rudyard Kipling."

Dr. Daniel E. Hughes, of Philadelphia, gave a programme on Easter in which the inmates of the insane department of the Philadelphia Hospital took the leading part in the rendition of sacred music. The hymns were difficult of performance, but under the careful training given the programme was completed with much satisfaction to all present. It was given to show what might be done toward developing the latent faculties of the insane.

Dr. Patrick Manson, in a communication to the *British Medical Journal*, says that Dr. Bancroft, of Burpengary, Brisbane, Australia, who is at present experimenting with mosquitoes and blood parasites, in a recent letter informs him that mosquitoes can be kept alive after feeding once on human blood by suspending in the vessel in which the insects are confined a fresh ripe banana. The banana should have the skin partially removed, and be renewed every fourth or fifth day. In this way the insects can be kept alive for upwards of six weeks. This is a fact which the many observers now at work on the mosquito-malaria theory will be glad to know of.

"Golf?" the physician said, with a sigh. "Golf, or more correctly golficitis, must be designated the fourth dementia. Golficitis is a permanent addition to English manias, and is attracting the attention of thinking alienists. This mania differs from others in that it is not acute in its chronic stages and is curable. The symptoms are a loathing for legitimate business, an abnormal disposition to copious profanity and nervous irritation, a passion for giddy and eccentric garments, a profound contempt for truth, a hatred of domestic restraint, accompanied by flushed face and a depraved love of out-of-doors."—*Golfing*.

On April 12, says the *Medical Record*, the New York press announced that Dr. Thomas H. Manley had been sued by a woman for the maltreatment of a thumb, and that $2000 was the sum ordered in verdict, there being no defense. It appears that last February a complaint was sent to the doctor from a lawyer about this case, inviting him to answer certain allegations and turn over $2000. This was answered, and Dr. Manley heard nothing more about the case until newspaper reports appeared. Now the courts have ordered the

judgment nullified and directed another trial. This case impresses the importance of always referring all legal documents from lawyers to your own counsel, and thus avoiding troublesome litigation.

ACCORDING to a London monthly, Prince Orbeliani, a Russian nobleman, purposes to establish an international sanitary league to supply a complete staff of bacteriologists, medical officers, chemists, and nurses (all of whom have gone through training in actual contact with epidemics) to deal with outbreaks in any country that may be affected. The prince sees no reason for counting absolutely on the supposed immunity of Europeans, in the present day, against plague which formerly carried off the populations of European cities by the hundred thousand. He argues that the danger threatening all countries ought to be encountered by the organized sanitary resources of all countries working together for the common safety.

THE *British Medical Journal* states that near Posen, in Prussia, a hygienic institute will be erected. It will contain a hygienic, bacteriologic, and a pathologic-anatomic department, with the usual staff of directors and assistants. Their sphere of work is to provide supervision and improvement of water-supplies, of drainage works, and the bestowal of refuse, soil and subsoil examination, hygienic supervision of works, factories, warehouses, etc., prevention of the spread of infectious diseases, post-mortem examinations, courses of lectures, some popular, on subjects connected with hygienic, bacteriologic, and pathological anatomy. It is hoped that the scientifically conducted efforts of the institute will be successful in arresting epidemics, such as cholera, smallpox, typhus, etc., which frequently have come into Prussia from across the Russian frontier.

ACCORDING to the *Medical Record*, a man named Edwards, who is said to be a regularly qualified physician, is posing in Paris as a mystic healer and is drawing large crowds of sufferers from supposedly incurable diseases. One of his patients is Loie Fuller, the shadow dancer, who is threatened with blindness and hopes the healer will save her sight. The man, who is about sixty years old, says he was born in Rome, and practiced medicine in Australia until he discovered accidentally his power to heal all diseases by drawing them out of the sufferer's body through the exertion of magnetic force. The worst of it is that his doors are besieged by throngs of well-to do and even wealthy people, who pay his large fees without a murmur, while scores and hundreds of well educated and thoroughly qualified physicians in Paris do not know whence the morrow's food will come.

NEW PUBLICATIONS.

DISEASES OF THE SKIN.

There are many things to commend the handbook of Dr. Jackson to the medical student and the busy practitioner. The language is concise and forcible, and the book is eminently practical. Any attempt to discuss debatable questions is avoided, more attention being given to the consideration of the symptomatology, diagnosis, and treatment; with every new edition all recent advances are recorded to the extent necessary to fulfil the mission of the work. Though the book does not include the latest fad of colored photography, the collection of photographs is good.

The appendix includes a list of many valuable and thoroughly tried remedies, which will undoubtedly prove of worth to the reader, especially to him unfamiliar with the remedies necessary for the treatment of skin diseases.

While the alphabetical arrangement of the different diseases may be convenient for the ready reference of the busy practitioner, it undoubtedly detracts from the value of a good book for the thorough student of dermatology, leading one to infer that the scientifically systematic study of diseases of the skin is not to be preferred, and having the tendency to disconnect all diseases which either by prominent symptoms or by a closely allied etiology are more or less intimately associated. A. P. B.

The Ready Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M.D. (Col.). Third Edition, Revised and Enlarged. New York and Philadelphia: Lea Bros. & Co., 1897.

TEXT-BOOK ON PRACTICAL OBSTETRICS.

A second edition of this excellent text-book is an expected outcome of its manifest value. The work has been prepared in a spirit which is eminently clinical. It aims at being a guide to practice. Anatomical, embryological, and pathological data have only been inserted where essential. The chapters on the mechanism of labor are especially excellent. A feature of the present work is the series of very realistic plates which elucidate the text. These are apparently taken from the actual subject and are very graphic in their effects.

The work will prove a reliable aid to the student in the acquisition of knowledge, and a guide to the practitioner in the practice of obstetrical art.

A Text-book on Practical Obstetrics. By Egbert H. Grandin, M.D., Gynecologist to the Columbus Hospital; Consulting Gynecologist to the French Hospital; late Consulting Obstetrician and Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynecological Society, etc. With the Collaboration of George W. Jarman, M.D., Gynecologist to the Cancer Hospital; Instructor in Gynecology in the Medical Department of the Columbia University; late Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynecological Society, etc. Second Edition, Revised and Enlarged. Illustrated with Sixty-four Full-page Photographic Plates and Eighty-six Illustrations in the Text. 6 1-2 x 9 1-2 inches. Pages xiv-461. Extra cloth, $4.00 net; sheep, $4.75 net. Philadelphia: The F. A. Davis Co.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

This volume of transactions contains a number of interesting papers contributed by various authors at the last annual meeting of the Society.

Transactions of the Medical Society of the State of North Carolina. Forty-fifth Annual Meeting, held at Charlotte, N. C., May 3, 4, and 5, 1898. Winston, N. C.: Carolina Publishing Company, 1898.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Osteomalacia in Man.

At a recent meeting of the Parisian Academy of Medicine (*Medical Press*, March 29, 1899) M. Berger communicated details of the case of a young man who entered his wards for double genu valgum. Osteotomy above the left condyle was practiced, and the knee straightened out; some time afterwards the femur was found to be consolidated. Towards this period, however, the patient complained of violent spontaneous pain in all the extremities, except in the operated limb. These pains were first considered to be those of rheumatism. It was only three months subsequently that abnormal mobility was remarked in the bones of the two lower extremities, which became the seat of considerable deformity. Analogous pains were felt in the arms, and these became deformed in their turn, and finally the thorax and the head were attacked in a similar manner. The vertebral column alone resisted the process of disintegration. The patient was besides suffering from interstitial nephritis, which by its rapid progress threatened his life. All treatment failed to arrest the progress of the primary disease.

Carbolic Acid as a Cause of Gangrene.

Whiteford (*Lancet*, No. 1, 1899) has used an aqueous solution of carbolic acid (1 in 60), applied with lint on infected wounds, for seven years with the best results. He has noticed the relief in his own case when he has cut his fingers while performing autopsies. When applied three times a day and properly covered it quickly relieves pain, limits absorption by contracting the blood- and lymph-vessels, acts as a local anesthetic, and relieves tension. He doubts its having any germicidal power in so weak a solution, especially where it may act through unbroken skin surfaces. He says he has come across several cases in which the continued application of carbolic acid to fingers has resulted in complete arrest of the circulation, followed by gangrene. Patients, unless warned, may continue such applications for many days, and because they do not suffer observe nothing amiss. The first thing noticed may be that the fingers on being incised may fail to bleed, owing to their being in a state of dry gangrene. Anemic young women, he says, are especially liable to this mishap.

MEDICINE.

The Esthetic Relations of Medicine and Life.

Geo. M. Gould (*Gaillard's Medical Journal*, April, 1899) says that in no part or specialty of the physician's work does he come into so direct and constant contact with esthetic and unesthetic prejudice as in ophthalmology. The conscientious oculist is tormented by it every hour of his life. It becomes at times positively disgusting and maddening. His work is to stop neuroses, headache, anemia, and reflexes of a hundred kinds, all of which are the great destroyers of health and of beauty. Eye-strain is the most potent of all causes of "crow's-feet," and of pinched and suffering faces, and yet every second woman prefers the homeliness and evidences of years not yet arrived to what she considers the hideousness of glasses—at least of spectacles—and eye-glasses are often as helpless and as harmful as no lenses at all. He knows one woman whose little remnant of mind is discarded because of her silly pride. Rather than wear glasses, she has given up all reading, writing, sewing, music—all occupation whatever, except calling and gossiping and theater-going. Another woman has turned her home into a hysteriac's hospital for part of the year, and for the rest of it she trundles her poor husband to watering-places, and impoverishes him in paying doctor bills. He has known women to hide from consciousness the fact that the cause of their relapses of "nervous prostration" was the eye-strain they would not allow to be cured. Periodically they take the "rest-cure," get a little relief until they return to the bedevilment of their husbands and to preparing a new breakdown by laziness, by bad "bossing" of servants thereby made worse, by reading trash, etc.

In these and a hundred other ways the physician is the accomplice or the enemy of what is a false or a true estheticism. If he is true to his calling he is at the same time true to the spirit of the esthetic ideal. The oculist has a sad fight against vanity and fashion—the hypocritic travesties of the genuinely beautiful.

Ten Hygienic Rules.

The following maxims won a prize offered by the Parisian publishers, Hachette & Co., for the ten most effectual rules for the preservation of mental and bodily health. The author, Dr. Decornet, of Ferte Sur Aube, won in a list of 500 competitors. The rules, as translated in *The Lancet*, run thus:

1. General Hygiene: Rise early, go to bed early, and in the meantime keep yourself occupied.

2. Respiratory Hygiene: Water and bread sustain life, but pure air and sunlight are indispensable for health.

3. Gastrointestinal Hygiene: Frugality and sobriety are the best elixirs for a long life.

4. Epidermal Hygiene: Cleanliness preserves from rust; the best kept machines last longest.

5. Sleep Hygiene: A sufficiency of rest repairs and strengthens; too much rest weakens and makes soft.

6. Clothes Hygiene: He is well clothed who keeps his body sufficiently warm, safeguarding it from all abrupt changes of temperature, while at the same time maintaining perfect freedom of motion.

7. House Hygiene: A house that is clean and cheerful makes a happy home.

8. Moral Hygiene: The mind reposes, and resumes its edge by means of relaxation and amusement, but excess opens the door to the passions; and these attract the vices.

9. Intellectual Hygiene: Gaiety conduces to love of life, and love of life is the half of health; on the other hand, sadness and gloom help on old age.

10. Professional Hygiene: Is it your brain that feeds you? Don't allow your arms and legs to become stiff. Dig for a livelihood, but don't omit to furbish your intellect and elevate your thought.

The Utility of Gargling.

The utility of gargling in diseases of the throat has been denied by several observers (*Lancet*, March 25, 1899), as, for instance, Dr. Kantorowicz. Gargles nevertheless continue to be prescribed by the majority of medical men and constitute one of the principal methods of treatment in those cases. In order to ascertain whether there are varied reasons for maintaining this practice Dr. Sanger has made some experiments, the results of which he published in the *Münchener Medicinische Wochenschrift*. He points out that the therapeutic utility of gargling depends on whether the fluid employed reaches the pharyngeal mucous membrane and the tonsils or not, and for the purpose of arriving at a definite conclusion he brushed the tonsils of a patient with methylene blue and made him afterwards gargle with water. In the result the water when ejected from the mouth was colorless, neither was there any blue tint visible in the interior of the mouth, although the tonsils continued to be intensely blue. Obviously, therefore, the fluid had not reached the tonsils. The same result was obtained in every instance. In another series of experiments the velum, a portion of the tongue, and the tonsils were dusted with wheat

flour, after which the person made use of a gargle consisting of a solution of iodine in glycerin, the consequence being that the velum and the tongue showed the blue color of starch acted on by iodine, whilst the flour on the tonsils was neither colored nor washed away. Dr. Sanger, therefore, concludes that gargling is useless, and that where this kind of local treatment is indicated it would be better to swab the pharyngeal mucous membrane with pieces of cotton-wool, avoiding brushes, which are liable to injure the mucous membrane.

The Influence of Alcohol on Muscular Work.

Destrel (*Quarterly Journal of Inebriety*, January, 1899) has made a large number of experiments to determine whether more work can be accomplished with alcohol than without. The result of his work shows that:

1. Alcohol has a favorable effect on the work-product whether the muscle is weary or not.

2. This favorable effect appears almost immediately, but is very transitory.

3. Immediately afterward alcohol has a very decided paralyzing effect. About a half-hour after taking alcohol the muscular power reaches a maximum that subsequent doses increase with difficulty.

4. The paralyzing effect of alcohol outweighs the momentary stimulation, so that the total work-product obtained with the use of alcohol is less than that obtained without it. In other words, alcohol is a deceptive means of dulling the sense of fatigue, but its action is momentary, and in the end injurious, the paralyzing effects upon the nervous system increasing rapidly, and with such force that any momentary good effect cannot counterbalance them.

Similar experiments with tea, coffee, and kola showed that the stimulating effect of these drugs, while less marked than that of alcohol, is continued longer, and is not followed by a paralyzing effect, as is the case with alcohol.

The Treatment of Flushing and Morbid Blushing.

F. Savary Pearce (*Philadelphia Medical Journal*, April 1, 1899) says that the treatment of these conditions will depend chiefly upon the alleviation of any possible predisposing disease or coexisting malady which may perhaps aggravate the flushing.

Vasomotor constrictors, as ergot or digitalin, may be judiciously employed, whether the case be idiopathic or due to vasoconstrictor paresis or to stimulation of vasodilator centers.

Especial study should be made of the diet, particularly in those

cases in which urticaria is known to follow the ingestion of certain articles. That critical urinalyses may reveal much in the case in regard to such matters as lithemic tendency, toxins, etc., seems pretty clear. Testing the propulsive power and the contents of the stomach, and the torpidity, etc., of the intestines, may clear up the difficulty somewhat.

Lithemic cases should be treated with antilithics, and if melancholy is bettered by this routine we should look for a subsequent waning of a toxemic vasodilatation. Strychnine should also be given in these cases. The subject of idiosyncrasy again recurs in scientific dealing with the individual, and treatment should be individualized rather than generally restrictive. In a general way proteids and carbohydrates should be restricted. Spinach is an excellent vegetable to supply iron and could well take the place of red meats in the diet of anemic cases, together with medicinal treatment by ferruginous drugs and waters. Rest, change of scene, massage, galvanism to the cervical sympathetic nerves, and hydrotherapy are all important measures.

Experimental Work on the Dilution Method of Immunization from Rabies.

Follen Cabot (*Journal of Experimental Medicine*, March 1, 1899) has made a number of experiments with the dilution method of immunization, and in drawing conclusions from his work says:

1. I have simplified the dilution method by using a stock glycerin emulsion of the virulent cord, from which the desired dilutions can be readily prepared. The proportion of glycerin should not exceed one-fifth part, if it is desired to retain the full virulence of the emulsion.

2. There is some danger of giving rabies to animals in the dilution immunization treatment, a danger which is not present in the Pasteur method.

3. The dried-cord method does not rest solely upon the principle of dilution, but is based also upon attenuation of the virus.

4. The Pasteur method being entirely free from the element of danger which pertains to the glycerin dilution method, and resting upon a sounder experimental basis, is the one to be preferred.

The Treatment of Croupous Pneumonia with Hot-water Bags.

L. Kolipinski (*Maryland Medical Journal*, March 25, 1899) advocates the use of the hot-water bag in this disease, and says as soon as a croupous pneumonia is diagnosed the treatment is as follows: A pair of hot-water bags are selected, the largest size found in the shops,

preferably of the capacity of a gallon. These are filled with boiling water, well secured from leakage, and each one wrapped in a small shawl of compact texture, or in a portion of blanket cut for the purpose. They are then placed side by side on the bed so that the mouths of the bags point upwards; over them is placed a third shawl, folded several times, or a further piece of blanket; above them two or possibly three pillows are arranged for the patient's head. The bags thus form a sort of shallow cradle for the postscapular regions. To make the plan clear to the attendant, he is told that the bags must be placed like a knapsack on the back of a soldier and a little higher up as well. The bags are refilled every three or four hours. The exterior temperature, found by placing a common atmospheric thermometer between the coverings of the bags and the patient, varies from 95° to 130° F. A mean temperature of 110° should be aimed at, as an elevation of 120° or more is liable to inflict severe burns on the skin, particularly so if the patient's cutaneous sensibility is for the time obtunded.

Modern Views on Gout in Relation to Treatment.

Dr. Mouillott, in the *Medical Press* of March 29, 1899, says the modern researches concerning gout seemed to resolve its treatment into two portions: (1) The prevention of the formation of the antecedents of uric acid by attention to the condition of both the gastric and duodenal digestions, and to the action of the liver, that much abused organ, so frequently the victim rather than the culprit. (2) The stimulation of excretion by attention to the functions of the kidneys, skin, bowels, and nervous system; to a lowered condition of the last named so much of the modern irregular gout is due.

Treatment of Gastroptosis and Gastroenteroptosis.

The treatment of gastroptosis and gastroenteroptosis is a complex study, says H. W. Bettman in his masterly essay on "The Shape and Position of the Stomach" (*Philadelphia Monthly Medical Journal*, March, 1899), and the general indications may be summed up as follows:

1. Increase the tension of the anterior abdominal wall and of the hollow viscera.

2. Diminish the gravity pressure of the abdominal viscera and the tympanites pressure of the bowels.

3. Adjust the various pressures within the abdomen in their natural relation to each other.

In other words, the tone of the muscular system must be increased and pathologic pressure must be relieved.

All of the usual means for improving the tone of the muscular and nervous systems find in the treatment of this disease their appropriate indications. Electricity, cold bathing, general massage, etc., are useful in many instances, but the physician must ever be fully conscious of just what results he may rationally hope to attain. When the anterior abdominal wall is exceedingly flabby and relaxed, Gallet recommends its resection, and this operation has been performed with success by Depage, Rouffart, Thiniar, and Sacre.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

A Study of Sixty-seven Cases of Primary Malignant Tumors of the Suprarenal Gland.

From the study of a large number of malignant tumors of the suprarenal gland, Dr. O. Ramsay (*Johns Hopkins Hospital Bulletin*, January, February, March, 1899) draws the following conclusions: (1) That while malignant tumors of the suprarenal gland are rare, they should be considered as one of the factors to be eliminated in the presence of an abdominal tumor; (2) that they are somewhat more common in the male sex; (3) that while in a certain proportion the symptoms are fairly well marked, there are many in which no symptom points to the suprarenal origin; (4) that rapid loss of strength, debility, emaciation, digestive disturbances, and abdominal pain are the most prominent symptoms; (5) that skin changes are rather the exception than the rule; (6) that they run a rapid course, the duration being shorter than usual with a neoplasm in other organs; (7) that the diagnosis is impossible in many, and difficult in all, cases; (8) that a differential diagnosis must be made from other suprarenal diseases, from renal tumors, from hepatic tumors, from diseased retroperitoneal glands, and from cysts and new growths of the pancreas; (9) that the prognosis is always serious, even following a successful operation, from the great frequency with which both glands are found involved, and the tendency to early metastases; (10) that operation gives the only hope of relief, and that it has been successful in two cases; (11) that the principal difficulties in the operation are the friability of the tumor, the great tendency to hemorrhage, and the frequency of adhesions.

Supraarterial Epicardial Fibroid Nodules.

J. H. Mason Knox, Jr. (*Journal of Experimental Medicine*, March, 1899), says that fibroid nodules seated in the epicardium directly over branches of the coronary arteries of the heart are not uncommon. While often resembling in gross and superficial appearances the nodules described by various writers under the name of "periarteritis nodosa," they differ from these in essential respects. They are seated outside of the adventitial coat and lie within the epicardium. They are composed of dense, fibrous, sclerotic tissue, poor in cells. In earlier stages of their formation they are richer in cells, both fibroblasts and lymphoid cells. These supraarterial nodules bear no definite relation to endarteritis, although they may be associated with this condition. Changes were found with great regularity in the arterial wall immediately beneath the nodule, which indicated a weakening of the wall in this situation. In consequence of the weakening in the arterial wall the artery would tend to bulge at the affected spot toward the epicardium were this tendency not restrained. The formation of the dense supraarterial nodule of fibrous tissue over the weakened area holds this tendency in check, and may therefore be regarded as an adaptive or compensatory change.

The Thermal Death-point of Tubercle Bacilli in Milk and Some Other Fluids.

Theobald Smith (*Journal of Experimental Medicine*, March, 1899) says that tubercle bacilli when suspended in distilled water, normal salt solution, bouillon, and milk, are destroyed at 60° C. in fifteen to twenty minutes. The larger number are destroyed in five to ten minutes.

When tubercle bacilli are suspended in milk, the pellicle which forms during the exposure at 60° C. may contain living bacilli after sixty minutes.

THERAPEUTICS.

Alcohol as an Antidote for Carbolic Acid.

W. O. Gross (*Fort Wayne Medical Journal Magazine*, No. 29, 1899), in following out the experiences of Phelps and Powell on the use of alcohol as a specific antidote for carbolic acid, says that he applied a quantity of pure carbolic acid to the back of his hand and allowed it to remain until the action of the acid had manifested itself by a burning sensation, when an application of pure alcohol was made, and the escharotic action of the acid was checked at once.

To further demonstrate the properties of alcohol as an antidote in carbolic acid poisoning, the writer deliberately placed the end of his tongue in carbolic acid which was contained in a shallow dish, with the result of receiving the full escharotic action of the acid on the soft, delicate tissues and membranes. The pain experienced was intense, yet the application of alcohol, which was made by holding a tablespoonful of the fluid in the mouth for a period of thirty seconds, entirely relieved the pain and destroyed the action of the carbolic acid so that no inconvenience was afterwards manifested.

Carbolic acid, when taken internally, acts energetically as a corrosive narcotic poison, its first effect being to corrode and destroy the tissues with which it comes in contact, producing a chain of toxicological symptoms not unlike those of mineral acids. The secondary effect is that of a narcotic with the characteristic action on the pupils, skin, temperature, respiration, and pulse.

The stimulating action of alcohol, when taken internally, causes it to counteract the secondary narcotic action of the carbolic acid.

The ease with which alcohol is procurable and the simplicity of its application, coupled with its safe and rapid action, stamps it as being, so far as known at the present time, the specific for poisoning by carbolic acid.

Stypticin in Uterine Hemorrhage.

Boldt (*Medical News*, April 8, 1899) has employed this new preparation, introduced by Martin Freund, in eighty-seven cases, which included nearly all uterine conditions giving rise to bloody discharge. In the menorrhagia of virgins without detectable changes in the pelvic organs, stypticin seemed to diminish the flow without any marked amelioration of the dysmenorrheal symptoms. In fibromyoma in only one case was the flow diminished, while in cancer the results were negative. In para- and periuterine inflammations following labor and abortion the drug appears to have a prompt effect, allaying the condition and stopping the blood loss. Hemorrhagic endometritis was benefited only after the use of the curette, when the action of stypticin was marked with beneficial effects on the second day. In other conditions its administration was followed by more or less favorable results.

Ronsse and Walton found that stypticin exerts a tonic action on the circulatory system, its effect on the heart being compared to that of digitalis. In fatal doses it produces paralysis of the respiratory centers. Stypticin may be administered in doses of 1, 2½, to 5 grains four times a day in capsules, or hypodermically in one- to

three-grain doses in a ten-per-cent solution. The writer did not find that the drug produced a hypnotic effect as has been claimed. He requests those who have tried other remedies and found them wanting to add stypticin to their therapeutic agents, and feels convinced that in it will be found a most useful addition, and that as the result of its adoption the curette and local treatment will be less frequently called for.

Creosote in Constipation.

Creosote is described by Vladimiro de Holstin (*Dietetic and Hygienic Gazette*) as an excellent means of combating chronic constipation without exercising any true purgative action. It should be prescribed pure, to be taken in doses of one to eight drops twice a day, immediately after breakfast and dinner, in a glass of milk, beer, wine and water, or pure water. The commencing dose should be one drop, and this gradually increased until the effective dose is reached, and it should be continued for some months. It should not be given in pills, capsules, or alcoholic solutions. It not only overcomes the chronic constipation, but it restores the appetite and braces up the system. Under its influence the stools become regular, bland, copious, and free from pain or intestinal irritation.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Suprarenal Gland Solution for Nasal and Laryngeal Application.

Dr. Lederman, of New York (*Laryngoscope*, April, 1899), has carried out numerous experiments with this agent with a view to obtaining a suitable solution for practical use in operating. The value of the desiccated powdered suprarenals of sheep has been fully determined, and bloodless operations on the septum are now an actual fact. There has been a decided disadvantage in the use of the watery solutions owing to their tendency to rapidly become putrid and unfit for use. The addition of such antiseptics as formalin, carbolic acid, and corrosive sublimate retards decomposition, but they also prohibit the marked vasoconstricting action of the gland. Following the suggestion of Fisch, of St. Louis, the writer employed a glycerin solution with satisfactory results. Ten grains of the gland is added to a drachm of 25-per-cent glycerin-water solution. This mixture is placed in a wide-mouthed bottle and well shaken. After standing at

ordinary temperature for forty-eight hours it is filtered through common filter-paper, with a resulting clear amber-colored solution. In a cool atmosphere this will keep for some time. It should be applied in the nose on the usual cotton applicator before the use of cocaine, and after as well. It blanches the tissues and retards the absorption of cocaine, thus preventing the constitutional symptoms produced by cocaine. On operating it is an agreeable surprise to find the field unobstructed, and but little, if any, blood in the nose. As reaction sometimes occurs it is always judicious to use a nasal plug for twenty-four hours. The writer recommends nosophen gauze for tamponade, or clean "spunk" cut in suitable shape and dipped in nosophen powder.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Otological Experiences During the Naval Battle of Santiago, on Board the Iowa.

Dr. M. H. Simons, U. S. N. (*Journal of the American Medical Association*, April 15, 1899), first considered the two kinds of powder used on board — the brown prismatic and the so-called smokeless powders. In the brown, some of the grains are unburned, and by the explosion are finely powdered. This dust is often blown back on to the decks of the ship, and is somewhat irritating to the mucous membranes. It causes slight congestion, which passes rapidly away. The smokeless powder does produce some slight amount of smoke, or rather haziness in the air, after a discharge of a large amount. Carbonic oxide gas forms in the breech, and when the latter is opened is changed to carbon dioxide; no ill effects were noted from this gas. After a number of discharges the decks become hazy with the fumes from this powder, and there is noticed a slight though acid smell. It is extremely irritating to all mucous membranes, though no serious trouble results. When the decks are washed down after the firing has ceased, this all passes away. After the battle of Santiago there were several cases of nasal, tonsillar, and eye inflammations; these were not complicated, and yielded at once to simple treatment. A few were deaf, some for from two to four days, but they all recovered by the use of inhalations and politzerizing. Only two cases were observed in which there was rupture of the membrana tympani. Here there was no pain; but the patients complained of tinnitus. The Doctor stated that he was himself slightly deaf as a result of that engagement.

When a gun is fired there is a feeling of a sudden blow, something like the blow from a bar of iron. With the small guns this is quite sharp, but with the large guns it is more heavy. Some complained of general muscular soreness after the battle. The two cases of perforation occurred in the vicinity of the eight-inch gun. In his opinion the deafness was the result of the irritation of the throat, primarily, this producing a closure of the Eustachian tube; a subsequent heavy discharge would force in the membrana tympani, thus forcing out a small amount of air, which could not return, and hence the drum would be somewhat retracted and slight deafness result.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Treatment of Eczema in Infants and Children.

In a paper read before the Section in Pediatrics of the New York Academy of Medicine, January 12, 1899, Dr. Charles W. Allen, among other things, said that the fact that infantile eczema shows a decided predilection for certain regions, notably the scalp, forehead, cheeks, the region behind the ears, flexures of the extremities, the neck, and groin, is accounted for largely by this fact of the seborrheal element predominating.

The reason that the cheek, next to the postauricular, is the region most frequently affected is because we have here what are termed the "flushing areas," or those of greatest vascularization.

For scalp affection, and for dry, scaly patches elsewhere, resorcin is useful, as it is in the seborrheal form of eczema in the adult; it is here equally efficacious, but must be used in decreased strength, as in the following prescription:

℞ Resorcin 0.5– 1.0
Washed sulphur. 2.0– 4.0
Lanolin 5.0–10.0
Lard .....ad 100.0
M.

In almost all eczemas about the anogenital and groin region during the past year Allen has been using a three-per-cent watery solution of methylene blue, and he can say without hesitation that here, as well as in erythema intertrigo in infants, it has given him most satisfactory results. The drug is somewhat analgetic, is soothing to the irritated, raw, and sometimes exulcerated surfaces, it forms a protective coating, is antiseptic, and from its discoloration leaves no doubt as to the time when a new coat of the solution is required.

The author uses methylene blue extensively in a great variety of eczemas, and believes it a valuable addition to our means of cure. Upon the exposed parts, however, the color is in most instances an objection; and in general the staining of the clothing might be a drawback. In point of fact, the parents are so well satisfied with the results that never has this been raised as a serious objection in any case so treated.

The form of seborrheal eczema is more rarely pityriasic with dry desquamation and slight infiltration of the integument. Here mild salicylic and ichthyol applications are of use, as for example:

℞ Salicylic acid 0.2–0.5
Powdered zinc oxide 10.0
Powdered starch 15.0
Compound tincture of benzoin 10.0
Lard ..... ad 100.0
M.

In the impetiginous form, if the crusts are thick and not readily removed by oil or soft soap, he often orders a favorite cataplasm of the French made with potato flour (*fecule de pomme de terre*), but usually with some antiseptic, such as mild bichloride, carbolic acid, or lysol solution, the latter having the advantage of being somewhat antipruritic.

In the more chronic, *i.e.*, persistent, forms in older children, and when there are extensive scaly plaques upon the back of the neck, or involving the margins of the scalp regions behind the ears, etc., Allen uses a stiff, paste-like ointment, as in the following formula:

℞ Resorcin 1.0
Tar 2.0
Prepared zinc carbonate 10.0
Powdered zinc oxide 10.0
Lanolin 50.0
Lard ..... ad 100.0
M.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Diabetes Mellitus and Pregnancy.

Taylor (*Boston Medical and Surgical Journal*, March 2, 1899) reports an example of this grave and fortunately rare condition. The patient, aged thirty-one, miscarried a few months after marriage. Some time later she again became pregnant, and an examination of the urine showed 8½ per cent of sugar present. Later still a trace

of albumin and hyaline and fine granular casts were discovered. The labor was normal until the head reached the perineum, when the pains became inefficient and recourse to forceps was had. The puerperium presented nothing unusual, except that strength returned slowly and the breasts were inactive. For a month or so before delivery the urine contained no sugar, but still had a trace of albumin. Two weeks after accouchement, however, sugar was again found, but disappeared together with the albumin two months later.

From the United States census the writer finds that the proportion of diabetics to the entire population is 2.8 to the 100,000. Among 35,000 in- and out-patients recorded at the Johns Hopkins Hospital, ten cases of diabetes were found; at the Massachusetts General Hospital, among 47,899 medical cases, 172 were diabetic; in 10,000 obstetric cases at the Boston Lying-in Hospital not a single case of diabetes was seen. The condition, therefore, is very rare. The writer gives the conclusions of Matthews Duncan in regard to this disorder:

1. Diabetes may come on during pregnancy.
2. Diabetes may occur only during pregnancy, being absent at other times.
3. Diabetes may cease with the termination of pregnancy, recurring some time afterwards.
4. Diabetes may come on soon after parturition.
5. Diabetes may not return in a pregnancy occurring after its cure.
6. Pregnancy may occur during diabetes.
7. Pregnancy and parturition may be apparently unaffected in their healthy progress by the diabetes.
8. Pregnancy is very liable to be interrupted in its course and probably always by the death of the fetus.

Pelvic Disease and Psychiatry.

D. Clark (*Canadian Journal of Medicine and Surgery*, February, 1899) believes that undue importance is given to minor uterine disease as a factor in the production of insanity. Surgical gynecology has an important function to discharge when imperatively demanded, but the knife deftly used as guillotine or for extirpation on hypothesis is bad practice. With the advent of insanity subacute diseases of the uterus disappear, such as dysmenorrhea, the various forms of metritis, subacute ovaritis, and catarrhal conditions. Insanity seems to be antagonistic to their active existence. No one denies that some uterine diseases need surgical treatment, such as uterine fibromata, but that fifty or sixty per cent of our female insane need gynecological treat-

ment is an extravagant statement. Such meddlesomeness has also a moral side. These raids upon the genitals of wives and maidens, spinsters and widows are unwarranted unless there are serious symptoms which lead to the suspicion of much mischief in these parts. It is not to be forgotten that in many there is no etiological connection between insanity and these diseased conditions. The coexistence of disease is one thing, and their relation to one another as cause and effect is another. Local diseases are often contemporaneous without being necessarily related to one another, except in a remote degree as parts of the same organism. Herein come fallacies in tabulating cases and recoveries as consequent upon local treatment or operations when there is no proof that such is the case. We know it to be a fact that a large number afflicted with uterine and ovarian disease, organic or functional, recover from insanity, although the abnormal condition may not be ameliorated or cured. Many such diseases exist before insanity comes on and are not causal in any way. Not only so, but many cases of recorded recovery are only those of remissions in periodic insanity or those which would have gotten well from eccentric shock or septic excitation, not because of but in spite of all interference, operative or otherwise.

Parturition Among the Indians.

C. B. Bell, of Vinita, I. T. (*Medical and Surgical Bulletin*, February, 1899), believes that misconception exists regarding the ease with which Indian women pass through the parturient act. Before the advent of civilization the percentage of complicated labors was undoubtedly smaller than at present, but now dystocia is more common than among white women. The Indian women of the five civilized tribes imitate the white in the matter of modern dress and habits so thoroughly that they have fallen heir early to those diseases that we have known for years to follow the modern woman's fashion of dress. The reason for the rapid development of difficult labor in Indian women seems to be due to the fact that they do not bear the strain of fashions as do those who for generations have followed each succeeding style. Thus civilization has given to the Indian a heritage not to be desired.

A Case of Double Ovariotomy During Pregnancy, with Hydatiform Mole.

Kingman (*Boston Medical and Surgical Journal*, Feb. 23, 1899) records an interesting case of pregnancy in which abdominal section was undertaken on account of excessive vomiting and rapid loss of flesh and strength, in the presence of two abdominal tumors. The

patient had a pulse of 130, and there was a moderate flow of blood from the vagina at the time. On opening the abdomen a multilocular cyst of the right ovary was discovered; another growth of the same size and character being on the left side below the fundus of the pregnant uterus and extending high up in the abdomen to the greater curvature of the stomach. Both tumors were removed, great care being observed not to interfere with the enlarged uterus more than was necessary. The same evening the patient passed a large clot, and the following morning a mass about a pint in amount, resembling boiled pearl tapioca. This was found to be a soft, mole-like growth. The case presents several points of interest:

1. There was a striking absence of vascularity of the pedicle, probably explained by the fact that the uterus did not contain a living ovum.

2. Although there appeared to be no true ovarian structure left, an ovule had been brought to maturity and impregnated.

3. It is possible that the advanced disease of the ovaries was responsible for a lessened vitality of the ovum, and led to disease of the chorion and death of the fetus. The patient recovered.

Gonorrheal Vaginitis and its Treatment.

Dr. H. Greenberg (*New York Medical Journal*, March 25, 1899) says that in the treatment of this affection rest in bed is indispensable in acute attacks and must always be insisted upon. The diet should be light, and alcohol in any form strictly forbidden. Purity of thought should be enjoyed. Allow nothing which will directly or indirectly tend to irritate the parts affected.

Cleanliness is next in importance, as it affords greater resistance to the tissues attacked and prevents the invaders from accumulating and multiplying. Keep them reduced in number. Sitz baths of warm water with sodium bicarbonate, twice daily, and with two hourly douches of sodium bicarbonate solution, a gallon each time, will answer the purpose effectively.

The sodium bicarbonate acts as a sedative rather than as a germicide. To kill the gonococci, once a day, after the morning sitz bath and douche, the vagina should be thoroughly scrubbed by the physician, with soap and water and a soft nail-brush. A speculum should be introduced and the tenacious and sticky pus from the cervix mechanically removed; the folds of the vagina should now be put on the stretch by the gradual withdrawal of the bivalve speculum and a 1-to-1000 bichloride solution, or, better still, five-per-cent pyoktanin (methylene blue), thoroughly applied by means of cotton on an applicator.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Summary of Recent Literature on the Treatment of Abscess of the Brain.

Joseph Collins, in the April number of the *American Journal of the Medical Sciences*, reviews the literature on this subject, and says that the past year shows a deplorable mortality. The most potent factor in contributing to this frightful mortality is the failure to recognize the existence of abscess of the brain before it has produced either septic complications or profound exhaustion. Surgical technique has apparently very little, if anything, to do with it. The mortality-rate of brain abscess will drop just in proportion to the earliness of recognition and the courage of the physician in directing the surgeon to seek for it, even though there be no exact localizing symptoms. Abscess of the brain secondary to middle-ear disease is located in the vast majority of cases either in the temporal lobe or in the cerebellar hemisphere of the same side. When one is reasonably sure of the existence of brain abscess, no hesitation should be had in exploring first one of these regions, and then, if it is not found, the other. Delaying the operation until the appearance of unequivocal localizing symptoms, or procrastinating by operating on the mastoid after symptoms of brain abscess are evident, when one is reasonably assured that abscess exists, is a far greater injustice to the patient than subjecting him to an exploratory trephining.

A Study of the Spinal Cord by Nissl's Method in Typhoid Fever and in Experimental Infection with the Typhoid Bacillus.

J. Nichols (*Journal of Experimental Medicine*, March 1, 1899) draws the following conclusions from his work:

1. The application of the Nissl method to the study of the motor cells of the spinal cord, and the nerve cells of the dorsal root ganglia in typhoid fever, shows that these cells regularly suffer pathological changes in the course of the infection.

2. The alterations in the motor cells are more constant and of a severer grade than are those in the cells of the sensory ganglia. The more characteristic changes consist of disintegration, solution and destruction of the chromatic substance of the cell, starting from

the axone hillock and proceeding toward the nucleus. Coincidently the nuclei of the affected cells seek the periphery. Alterations are also suffered by the nucleus and nucleolus.

3. While this central form of chromatolysis is the prevailing type of pathological change, disintegration, etc., of the Nissl bodies situated in the periphery of the cell and in the dendrites is also observed (peripheral chromatolysis).

4. In experimental infection with typhoid bacilli in rabbits, a similar series of lesions in the corresponding nerve cells in the spinal cord and ganglia is encountered.

5. The main or central type of lesions discovered is identical with that found in man and animals after section, destruction, or even slight injury of the peripheral nerves.

6. The examination of the peripheral nerves arising from the lumbar segment of the cord (the site in man and rabbit of the most profound changes) in rabbits inoculated with typhoid bacilli showed well-marked evidences of parenchymatous degeneration.

7. It is probable that lesions of the peripheral nerves in typhoid fever in human beings are common and that the post-typhoid hyperesthesias and paralyses are due to this cause.

Cases of Sciatic and Brachial Neuritis and Neuralgia; Treatment and Cure by Electrostatic Currents.

From a large number of cases treated in this manner, W. J. Morton (*Medical Record*, April 15, 1899) concludes that:

1. The pain of neuritis is temporarily relieved from the first treatment, and the case is totally relieved and cured in a minimum duration of time.

2. The immobility and fixation of joints and limbs at once disappear unless due to prior adhesions.

3. The more acute the case, the more urgent immediate electric treatment and the more speedy the relief and cure.

4. An acute case is debarred from becoming a chronic case.

5. Immobility by splints or plaster bandages is superfluous and sometimes harmful by promoting adhesions.

6. High potential currents, of the type here referred to, produce a sedative effect upon tissue, viz., upon muscle, nerve, and any contractile tissue, produce vasomotor dilatation, and constitute the most effective curative treatment of neuritis.

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ORIGINAL CONTRIBUTIONS.

EUROPEAN OBSTETRICS.*

BY J. J. MULHERON, M.D., DETROIT, MICH.

Having during the past year made a tour of a number of the medical centers of the old world, and devoted special attention to their obstetric and gynecological clinics, I have thought that a mention of the methods there in vogue, with comparisons, at points, with those obtaining in private practice with us, might prove of sufficient interest to warrant the effort.

Obstetrics and gynecology go hand in hand abroad, as a rule, the two subjects being covered by the same teacher. The time limit imposed on papers by this Association obliges me to confine my remarks to one division, and I have selected that of obstetrics. I would remark, however, that the union of the two subjects seems to me to be eminently proper, as it is natural. The obstetrician should certainly be a gynecologist, if not *vice versa*. The complications which are liable to arise in the lying-in room not infrequently demand a prompt, energetic, and intelligent attention which is impossible in the absence of the knowledge and technique which are best acquired through special gynecological study and experience. Without such knowledge the accoucheur has really little or nothing to commend him over the ordinary midwife. Meddlesome midwifery, which has so much evil charged up against it, is too often the direct outcome of half knowledge. In the lying-in room "a little learning is a dangerous thing."

Gynecological specialism, as a distinctive vocation, is peculiarly American in its origin, cultivation, and development. It has found little favor abroad, where the tendency is rather to regard the body as a

*Read before the Detroit Medical and Library Association.

whole—a mechanism, as it were, made up of a series of interdependent parts, no one of which may be fenced off from the rest and there subjected to special treatment. Incidentally I may remark that outside of the eye-and-ear and nose-and-throat men, those whom I found giving special attention to the diseases peculiar to different parts of the body were men of mature years who had in general practice developed predilections for the study and treatment of peculiar diseases. The graduate who enters college, continues therein and leaves it with the fixed purpose of immediately becoming a specialist, is a peculiarly American product.

I visited and spent some time at the clinics of Vienna, Prague, Dresden, Berlin, Christiania, London, and Dublin, but my chief stay was at Vienna, where I put in nearly three months. Of obstetrics as practiced at the Allgemeine Krankenhaus clinics, of the latter city, I am, I may presume to say, in a position to speak by the card; and my more superficial observation at the other clinics leads me to regard Vienna obstetrics as fairly representative of the foreign art in this field.

The Treatment on Reception.—The treatment of the woman about to give birth may be said to begin at the "Aufnahm," or her reception into the clinic. It is the intention not to admit patients into the maternity wards earlier than two weeks before parturition, although pregnant women are encouraged to present themselves for examination much earlier. The examination at the "Aufnahm" is for the purpose of determining the period of gestation, the presentation of the fetus, the pelvic diameters, and the woman's general condition. There are three obstetric clinics at the Allgemeine Krankenhaus, and at the "Aufnahms," which begin at 5 P.M. daily, an average number of thirty women are found in waiting. The candidate for admission disrobes in an anteroom and enters the examining room clad only in a short gown with which the nurse provides her. She is laid on a cot, where the nurse divests her mons veneris of superfluous hair, scrubs the external genitalia with soap and water, and gives her a vaginal douche of a one-per-cent lysol solution. The accoucheur then takes her in charge. The diagnoses of the period of gestation and of the fetal presentation are solely by palpation, percussion, and auscultation, except in cases of unduly heavy abdominal walls, when the vaginal exploration is superadded. The facility with which these diagnoses by the external method are made is a revelation to the practitioner whose experience has been limited to a private clientele. I believe I voice the experience of the latter when I say that in my own case, after attempts to perfect myself in this art running through many years of private practice, I could not by this means, except in

especially favorable cases, make a diagnosis on which I could rely without calling in the aid of the vaginal touch. The advantages of being able to determine the presentation by external examination must readily suggest themselves, particularly through the fact that abnormal presentations may thus be diagnosed before the rupture of the membranes, and while there is still a possibility of converting them by external manipulation into normal presentations. Facility in this method of diagnosis is also of inestimable value as an aid to the vaginal method. It is not always easy, or even possible, especially when the scalp is tumefied, or when a caput succedaneum presents, to determine beyond a doubt whether the bregma is posterior or anterior, and the evils of brute force applied to the forceps in occiput posterior presentation, without any regard to rotation, are among the opprobria of the lying-in room.

The presentation having been diagnosed, abnormal and particularly transverse positions are rectified by external manipulation under narcosis. The agent employed at Schauta's Klinik is the Schleich mixture—sulphuric ether two parts, petroleum ether one part, and chloroform one part. Schauta is especially partial to this anesthetic. Since employing it he has not had a single untoward result from anesthesia in either his obstetric or gynecological clinic. He claims for it also less nausea and less depression as sequelæ of the anesthesia than follow the use of either chloroform or ether uncombined.

Pelvimetry.—Every woman appearing at the "Aufnahm" is measured with the pelvimeter and the measurements recorded, the internal measurements being, however, reserved for such cases only as show a contraction in the external measurements. The measurements taken externally are between the trochanters, between the crests, between the spinous processes and the external conjugate, or the diameter of Baudelocque. In connection with the pelvimetry, the woman's head, sternum, and tibiæ are also examined for evidences of rachitis, which, for some unexplained reason, is known in Vienna as "die Englische Krankheit" (the English sickness). If its relative prevalence in different countries had aught to do with fixing to the disease a pseudonym, one would certainly call rickets the Austrian rather than the English disease. It must be very prevalent in Austro-Hungary, from the traces one sees of it at the Allgemeine Krankenhaus clinics. The poverty of the masses, with the accompanying underfeeding, overwork, and bad sanitation, have their natural effect in this disease. The consequence is that there is probably nowhere else in the world so much dystocia as one finds at the maternities in Vienna, due principally, of course, to pelvic contractions, the foundations of which were laid before maturity. In an experience extending over thirty

years, and embracing over two thousand cases of labor, it has been my fortune never to have encountered in my own practice a case which I have not been able to deliver by means of the forceps, without puncturing the child's head. During my visit to the maternity of Christiania, Norway, inquiry revealed the information that neither craniotomy nor Cæsarian section had been practiced there within the experience of any of the physicians in charge of the institution. During my stay in Vienna I witnessed no less than five craniotomies. Cæsarian section is very rarely practiced there, and only in carefully selected cases. The preference is for craniotomy and subsequent vaginal hysterectomy. The increased safety to the mother by this procedure is held to more than counterbalance the better chance for the child through Cæsarian section. Another potent reason for the disfavor into which the latter operation has fallen lies in the fact that most of the cases sent to the clinic for operative delivery are infected, through the efforts of outside physicians to accomplish delivery by either version or the forceps at the women's homes, where proper aseptic conditions are not to be relied upon. The mortality attending the Cæsarian section in such cases caused the operation to fall into disrepute. It is now made only on cases in which no operative procedure has been attempted prior to their admission.

The question occurs whether the rigid system of inspection and physical examination pursued at the "Aufnahm" is applicable to private practice in this country. Certainly the necessity for it is not so urgent with us, where rachitis is a rare disease and serious pelvic contraction is so seldom encountered. On general principles, however, no primipara should be allowed to progress to parturition without having been carefully examined with a view to determining her ability to discharge the supreme function of child-bearing. This ability cannot be predicated in any case without a careful examination, and certainly pelvimetry is much less objectionable than digital measurements *per vaginam*. While from a professional standpoint we could not condemn the fellow member of this Association on whom, a few years ago, an irate young husband visited physical castigation because of his making digital pelvimetry *per vaginam* on his wife, she being in the seventh month of her gestation, nevertheless we could not withhold from the combative spouse of a buxom young wife a certain meed of sympathy. In our treatment of these cases we may not disregard the obligations imposed by modesty. In further support of the wisdom of the careful preliminary examination of the woman pregnant with her first child, I would urge its salutary moral effect. Very few young women thus situated but have serious apprehensions, and the positive assurance that "everything is all right," which the

physician may give after a proper examination, removes a weight of anxiety which, if allowed to be borne until labor actually sets in, is not in the interest of eutocia. Should everything on the contrary be "not all right," the sooner the fact is discovered the better it must certainly be for all concerned.

Preparatory Treatment.—The woman, having been accepted at the "Aufnahm," is assigned to a bed in the lying-in ward during her preliminary stay, in which her general condition receives careful attention, her bowels being kept soluble and the action of her kidneys closely watched. This is very important. The careful surgeon places his patient on preparatory treatment to a contemplated operation. He sees that the excretory apparatus is active, so that all excrementitious matter which is liable to deteriorate the blood-serum, Nature's great antitoxin, is carried off and the serum put in condition to destroy morbific microorganisms. In this respect also it is well to consider the parturient woman as if she were undergoing a surgical operation. Certainly the separation of the placenta, as well as the progress of the child through the soft parts, leaves solutions of continuity which may be avenues for the entrance of noxious micrococci. After a course of depurative and tonic treatment, the woman, enervated by the various demands peculiar to the unnatural environments of modern life, is much better prepared to resist the dangers to which childbirth subjects her. We have in several of our indigenous drugs very valuable remedies in such a course of treatment. Among these I might particularly mention golden-seal, black haw, black cohosh, and wahoo. They make a tonic, sedative, and cholagogue laxative combination peculiarly adapted to the last two months of gestation.

With the onset of labor the woman is removed to the "Kreis Zimmer," or parturition room, where she is at once given a full soap-and-water bath, her external genitalia receiving special attention. At the end of her cot is posted the report of her examination at the "Aufnahm." When this report shows no aberration the woman is left very severely alone, no examination being made in such cases unless undue tardiness should be manifest in either of the stages of labor. A vaginal examination being considered necessary at any time, the examiner's hands are as carefully prepared as if they were to enter the peritoneal cavity. They are first scrubbed with a brush and soap under a strong stream from the faucet, then washed for several minutes in a huge basin of alcohol, and afterwards soaked in a 1:1000 bichloride solution. No lubricant is permitted, the finger or fingers (index and middle finger) being introduced while still dripping with the bichloride. In normal labors the attending accoucheur is little more than a spectator of the procedure, the "dirty work"

being done entirely by the nurse. The latter is not permitted to touch the patient's genitalia until after the head has begun to distend the vulva, when she supports and pulls forward the perineum with a handful of absorbent cotton saturated with a one-per-cent lysol solution. Under no circumstances is she permitted to introduce her finger.

Episiotomy.—The attending accoucheur watches closely, and should there seem to be danger of rupture, he forestalls it by episiotomy. The incision is made with a blunt-pointed scissors of special construction, but may also be made with a blunt-pointed bistoury. I did not see a single case of rupture of the perineum in the several hundred deliveries which I witnessed. This was in pleasing contrast with the records of our private practice, especially in the confinement of primiparæ. The wisdom of substituting the definite, clean, lateral artificial wound, which is so easily repaired, for the indefinite, ragged, spontaneous tear in which coaptation of the divided ends of the transversus perinei is so difficult, is too apparent for argument. One can hardly have witnessed the systematic resort to episiotomy without coming away with the conviction that it is, to say the least, a sin of omission for the accoucheur to permit a laceration of the perineum. The woman is not delivered under cover, as is too frequently done in private practice, in deference to an exaggerated modesty (which is not always confined to the patient), and the sense of sight is much more reliable than that of touch in detecting threatened dangers during the passage of the child's head.

Digital Interference.—While the rule against vaginal examination and assistance of labor by the accoucheur's manipulations in the vagina is, in the main, commendable, its enforcement in private practice would, in my opinion, not be satisfactory to the patient. The private patient cannot, in the very nature of the case, be subjected to the discipline possible in a hospital, and especially in the Allgemeine Krankenhaus, over whose entrance might appropriately be written, "Who enters here leaves all independence behind." To leave a private parturient in this country absolutely alone until the child's head begins to distend the vulva, although she has been in the severe throes for five or six hours, would be to call down the anathemas, if indeed it did not call down something more tangible, from the free and independent American husband. Our women expect to be "helped," and few of them would be satisfied to have their attendant merely stand by and watch them, even though he might throw whole volumes of sympathy into his facile face. Then, too, the accoucheur may really help the woman by means of his finger in the vagina. To say nothing of the promotion of rotation, the titillation of the os tincæ to stimulate

contractions has, for instance, been practiced with benefit from time immemorial, to the best of our knowledge and belief. The shoving back of the fold of cervix which is prone to form between the pubis and the child's head is also so much in the interest of both mother and fetus as not to be neglected. And then, again, the stretching of the perineum, as recommended by Lusk, is a valuable prophylactic against laceration. These valuable interferences, which also assure the woman that something is being done for her, may moreover be resorted to with impunity if proper aseptic precautions be observed.

Anesthesia.—An anesthetic is never given to the parturient woman, except when operative interference is deemed necessary. I have seen women in hard labor for thirty-six hours, and on asking why something was not done to ease the agony of the throes have been met with that peculiar elevation of the eyebrows and diagonal shrug of shoulders and the word "Wissenschaft," all of which being interpreted went to say that the exhibition of an anesthetic for such purpose is not in the interest of science. The physician in private practice in this country who should regard his patient as simply a scientific study, and oblige her to suffer as the women do in the European lying-in wards, would soon find himself minus his clientele. The news would soon be bruited abroad among the ladies that he is an inhuman monster. In deference to the demand for chloroform which seems to have sprung up among our women, more particularly, I think, during the past ten or fifteen years, we probably employ the anesthetic in many cases in which it might be dispensed with. I believe, however, that obstetrical anesthesia, as distinguished from surgical narcosis, is not only free from danger, but is a positive benefit to the parturient woman. But the arguments in support of this opinion would be too lengthy for insertion here.

The Postpartum Douche.—This is not employed at Vienna as a routine measure. This, I may say, is contrary to my own practice, although I am willing to concede that with the rigid aseptic methods in vogue there the necessity for it is not imperative. Could we enforce these methods as thoroughly in private practice, the necessity would not be so great here. We should, I think, give weight to the fact that the conditions in private houses are different from those which obtain in a well-regulated maternity, in which the aseptic precautions are quite as stringent as those of a surgical hospital. No one would to-day perform a major surgical operation in the bedchamber of a private house, with its dusty carpets and curtains, and time-stained, papered walls, in which the woman is confined. I believe the postpartum daily antiseptic douche to be necessary against

the microorganisms which infest even the most cleanly of the lying-in chambers of private houses. The accumulation of blood-clots and detritus in the vagina favored by the prolonged dorsal decubitus forms a most favorable culture medium for microbes. When we remember, furthermore, that this culture medium lies in immediate contact with a part of the body particularly rich in lymphatic supply, and that with the woman lying on her back drainage therefrom is necessarily imperfect, we must recognize a combination peculiarly favorable to septic infection, a combination which the surgeon would scarcely permit after an operation on the vagina. It is my practice to flush out the vagina at least once a day, for three or four days after delivery, with a 1:4000 bichloride solution, and I have been quite satisfied with the result. I have been impressed with the fact that in the three cases of puerperal septicemia which I have seen in consulta-

FIG. 1.

tion during the past six months, the vaginal douche had not been employed until after the chill and rise of temperature had occurred. When those who oppose the routine employment of the postpartum antiseptic douche can demonstrate to me the difference between puerperal septicemia and the septicemia which is the *bête noir* against which the surgeon takes such stringent precautions, I may change my practice.

The Tying of the Cord.—I was struck with the method in which the cord was tied in Vienna. I regard it as the ideal method. A ligature is tied at a point about five inches from the umbilicus, then the cord is severed and allowed to bleed from the maternal side. The ends of the ligature are then seized and carried back to a point half an inch from the umbilicus, where the second tie is made. The result is a loop of cord between the two ligatures (Fig. 1). A more

effective precaution against hemorrhage and septic infection of the cord cannot be conceived. No antiseptic dressing is necessary to the cord thus treated. To find exit, it will readily be seen, the blood must pass the two ligatures, and in addition through the included loop, where it is likely to form a restraining clot.

Immediately on delivery the child's eyes are washed off with pure water and afterwards with a solution of boracic acid. The instillation of the nitrate of silver solution after the manner of Crédé is practiced only in cases of actual or suspected gonorrhea of the mother.

FIG. 2.

FIG. 3.

Artificial Respiration—The Schultze Method.—As might naturally be expected, from the great frequency of pelvic contraction with consequent dystocia, the occurrence of asphyxia in the fetus is very frequent in Vienna. Artificial methods for resuscitating the child have consequently been developed there as they probably have at no other clinic. The excitation of the reflexes is first attempted by vigorous spanking of the nates. This failing, plunging the child into alternately hot and

cold baths is tried, and this procedure not succeeding, the Schultze method of stimulating respiration is resorted to. Two forms of asphyxia are recognized, viz., the anemic and the apoplectic. In the former, when recognized prior to the ligation of the cord, as it readily may be from the child's pale and limp appearance, the treatment consists in first allowing the child to remain attached, even for a considerable time after the placenta has been delivered. It thus receives the greatest possible amount of placental blood, and through the exposure of the uterine surface of the placenta to the atmospheric air oxygenation of the blood is promoted. While thus connected the reflexes are sought to be stimulated by vigorous spanking. The Schultze

FIG. 4.

method consists in seizing the child just below the neck, the fingers resting on the dorsum, and the thumbs on the thorax, the child facing in the same direction as the operator. The first step is the holding of the child downward, its feet touching the floor, and the second movement consists in the operator's swinging it at arm's length upward and backwards over his shoulder (Figs. 2 and 3). This motion is repeated about eight times a minute. Certainly a more effective method of alternately expanding and compressing the thorax has not yet been introduced. The compression of the abdomen through the flexion caused by the upward and backward movement drives the diaphragm upward, and the downward sweep favors its descent, during which the air rushes in to fill the vacuum, again to be expelled by the upward and backward swing and flexion. The impact of the air during the

swing also doubtless excites the reflexes. The movement must be kept up as long as the slightest cardiac pulsation remains, and I have seen children brought to after a full half-hour of apparently useless effort. The Schultze method is manifestly best adapted to cases of apoplectic asphyxia. Personally I should give preference to the

Byrd-Dew Method in cases of anemic asphyxia, principally because of the fact that it can be practiced while the child is immersed in a hot bath, heat being so important in the resuscitation of this class of cases, in which respect they differ from those of the apoplectic variety. In this method the child is held with its neck between the finger and thumb of one hand, while the nates are held by the other

Fig. 5.

hand. Thus held, the body is alternately flexed and extended on itself and the respiratory movements thus imitated (Figs. 4, 5, and 6). The extension must be to a degree which might be regarded as flexion of the dorsal surface. This is important, for the greater this extension the further is the diaphragm pulled down, and the greater the consequent vacuum in the thorax. The flexion must be to the extent of bringing the child's knees in contact with its sternum.

If the American graduate who has spent some time at the Vienna maternity were to interrogate his recollections for a special lesson which has been impressed on him, he would find it, I think, in the close attention to minutiæ which is there taught. This attention cannot at all times be regarded as having been prompted by an undivided

concern for the patient's welfare. The scientific rather than the humanitarian spirit seems to pervade the institution, and while the former is supposed to cover and embrace the latter, an observation of its practical operation in the lying-in room does not always bear out the supposition. As between the two spirits, if one alone must be the guiding force of the accoucheur's conduct, there can, of course, be no difficulty of choice. But there is no reason why one should rule exclusively. Pure science may at times prove harsh, but it is much to be preferred to the mawkish sentimentalism which caters entirely to the woman's whims. There is too much of the latter in American practice. The woman must be handled with the iron hand, but there is no

Fig. 6.

objection to its being gloved with velvet. The thorough familiarity with the mechanism of labor, combined with the absolute knowledge of the anatomical configuration of the pelvis of each woman brought to bed, which are so much in evidence in the foreign maternities, might with profit be emulated by us. Is it too much to say that the graduates of our schools go forth but indifferently equipped in these regards? This much may nevertheless be affirmed, that regardless of the equipment with which he goes forth from his alma mater, it will stand the practitioner in good stead to frequently revert to first principles. The beauty of the mechanism of labor becomes more and more beautiful as one becomes more and more familiar with its intricacies. Herein is a field in which familiarity, so far from breeding contempt, heightens admiration and deepens reverence.

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HAWAIIAN MEDICINE.

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Under this head I intend to deal with the subject of Hawaiian medicine as practiced for ages by the native physicians of Hawaii. From searching those records of the past which were accessible and seemed trustworthy to me, and from conversations with some of the better informed of my Hawaiian acquaintances, a large amount of information was obtained. Very little was learned from writings; but most all from conversations, and my own observations during a period of many years. The subject seems of deep interest, and deals with a highly important and little known feature of Hawaiian life.

The *kahuna*,* or "medicine man," exercised, and to-day still continues to exercise, a power over the native race greater almost than that of all the kings or chiefs who ever ruled them. The knowledge and use of medicinal herbs, as well as all rules for the treatment of the sick or injured, is traced back, in tradition and legend, far into the dim, mythical past. The gift of healing was from the gods. The name of the first mortal honored with this great power tradition says was one Koleamoku. He taught his secrets to certain men who were his disciples. They, in turn, transmitted the secrets of their art to younger men, as they have continued to be transmitted even unto the present day. The earliest of the kahunas or doctors were deified, and it was to them that their followers addressed many of their prayers in the incantation ceremonies which accompanied, and which are, in fact, an important part of, the Hawaiian method of healing.

As time went on the practice of medicine was found to be lucrative. The kahunas, therefore, soon made the art hereditary, and confined the knowledge to their immediate descendants. As their power and wealth increased, they came to form a distinct order of priests, high in favor with the rulers of the land. They were called *kahuna lapaau mai*, which means, "priest or sorcerer to heal sickness."

In administering his medicines the kahuna was at first, perhaps, not always fortunate, and discovered that with certain herbs he oft produced excruciating agony, or even fatal results. This led to his putting his knowledge for the sake of favor, power, or gain, to a very serious and ofttimes dreadful use. His possession of the power of

* *Kahuna* is a compound word from *kahu* and *ana*. Kahu means an honored or high servant, one who has or takes charge of persons or property. Ana means to work or practice. A king or chief is rightly called a kahuna (*kahuna alii*), because he has the care of his people. Members of all professions and trades are kahunas—*kahuna laapau*, a physician; *kahuna pule*, a priest; *kahuna kalai laau*, a carpenter, etc. When the word kahuna is used without any qualifying words, it always means a physician.

mysteriously producing death without violence earned for him a new title, that of *kahuna anaana*, or "the priest or sorcerer who prays to death." The ignorant natives never attributed the deaths to medicines administered, but to the prayers or incantations of the priest. The kahuna no doubt found it to his interest to encourage this belief, as it not only invested him with tremendous power, but lessened the danger of his medical secrets becoming common property.

Now came a time of great and terrible prosperity, which continues, successfully, at the present time. He began to be secretly bribed by individuals to inflict their enemies with painful disease, or put them entirely out of the way. This led to still greater enlargement of the kahuna's sphere of usefulness—to himself. People who found themselves suffering from sickness immediately employed a kahuna to find out through whose instigation they had become so afflicted, and then bribed the mighty one to retaliate on any unfortuate person that he, the kahuna, chose to designate.

It is reasonable to suppose that this condition of affairs would naturally lead to such a general revulsion of feeling as to eventually jeopardize the lives of the kahunas themselves; that an uprising against them by the people would bring to a disastrous end the entire priestly order. Far from it! Implanted in each native breast is a passion which civilization cannot eradicate, for it has never been eradicated from the breasts of those peoples who have reached the, as yet, highest state of civilization known in the history of the world. I mean the passion of revenge, and in secretly encouraging and gratifying this passion the kahuna waxed constantly richer and more powerful in the land.

In preparing their medicines, which are all vegetable, the kahunas use nothing but decoctions and infusions, and, for some purposes, the green plants are simply bruised with stones.

The preparation of Awa (*Piper methysticum*) is very peculiar when it is to be used as medicine. Under all circumstances only the dried root of the plant is employed. Those bunches of roots procured from the districts of Puna and Kona, island of Hawaii, are considered the best. For ordinary drinking purposes the roots are pounded up in a stone or wooden mortar, with the addition of some water, and then strained through a dried mass of grass or reeds called the *ahu-awa*.*

* *Ahu-Awa*. This is the name of a rush which grows in low spots near both salt and fresh water. It has a very strong fiber. Some writers say it is used for making cord and hats, as well as for straining awa. Hawaiians deny the statement that hats are made of the fiber. Its only use as a cord is when the green reed is twisted into a strand and used to string fish. To strain awa the reed is prepared in the following way: Fresh stems are procured, and after being crushed or stripped between two round pieces of wood in order to remove as much as possible of the moisture, the reeds are hung up to become thoroughly dry. When dry, they are bunched; and through the meshes of the mass the awa is strained.

The kahuna does not want his awa pounded. He must have it cut into small pieces, which are chewed into moist cuds by young maidens. These cuds are then thrown into a calabash known as a *kanoa*,* mixed with water, and the liquid then strained through the ahu-awa bunch of grass. Awa is much employed by the kahuna in his incantations, and the way in which he uses it will be described anon. Awa is the popular national drink, as it is throughout Polynesia. In the South Seas it is never pounded, but always prepared by the chewing method. Its effect on the human system has been variously described by travelers. I have tried it quite often. It is rather disagreeable and acrid to the taste, but the effect is very soothing. It is found to be of great benefit after prolonged muscular exertion. When a Hawaiian indulges in an awa debauch, he does not befuddle his brain so much as he does his arms and legs. Awa when drunk in large quantities causes temporary loss of muscular power, leaving its victim almost absolutely helpless. This shows its action on the motor centers of the spinal cord. It also has a paralyzing effect on the peripheral endings of the sensory nerves, as external sensibility is greatly diminished or, for a short time, entirely lost. When taken daily, as it is by confirmed awa drinkers, it has, in course of time, a marked effect on the glandular secretions, especially of the skin, greatly diminishing them all. The result is that an old toper presents a peculiar scabby appearance, and is constantly shedding any amount of epidermal scales. The native kahuna very justly uses awa for all acute inflammations of mucous membranes. Of late years awa, under the name of *kava-kava*, has been introduced into our own practice as a specific for gonorrhea. No doubt it lessens the discharge and allays the pain of the acute stage, by acting as an anesthetic on the urethral mucous membrane.

Many other plants can be mentioned which are used in Hawaiian medicine. The juice obtained from the pulp of the gourd and stems of the calabash vine (*Cucurbita lagenaria*) acts as a violent drastic cathartic, and is advantageously given by native doctors in all dropsical affections. This is one of the preparations much in vogue to cause death, when so desired by the *kahuna anaana*.

The *koali*, which is the Hawaiian name for scammony (*Convolvulus Scammonia*), has many uses. The vine is made into poultices for sprains and chronic ulcers, and it is placed on fractured limbs to aid in the union of the bones. A decoction from the scraped root is found a useful purgative, and much employed for children. There are several members of the Convolvulus family which grow very luxuriantly on the Hawaiian Islands. The most important is the *Convolvulus*

* *Kanoa*. This is an irregular-shaped bowl or dish made from the calabash gourd. It has a hole in one end through which a loop of cocoanut husk string is passed, by which it is hung up when not in use. There is a curvature on one side of the rim to fit the thumb and make it more easy to hold when pouring out the awa.

Batatas, or common sweet potato, which forms a nutritious and cheap article of food.

That the kahunas are well versed in the virtues of compound prescriptions is evinced by a favorite mixture for lung troubles and stomachal disturbances, and which is also used as a general tonic. It is called the *Apu-Ihi*, a compound word from *apu*, a cup made from cocoanut shell, and *Ihi*, the name of one of the ingredients.

The *Ihi* or *Ihi-ai*, from which the medicine takes its name, is a creeping plant, the vine and leaf being used. Why it should give the compound its name I cannot imagine, as it is by no means the principal ingredient. Its action is merely that of a mild laxative. Ihi has another meaning—sacred, or holy. If we adopt the latter, the name of the compound is Sacred or Holy Cup, which, to say the least, is very poetical and impressive. I believe it is correct. If we stop to consider that supernaturalism is the foundation stone of kahunaism, it is a translation which is in harmony, and therefore more acceptable.

Another ingredient is the juice of the pounded fruit of the *Noni*. This plant is a shrub, the bark and root of which make an excellent dye, coloring red. The fruit is large, heavy, and lobulated, and has proved as a missile, in one native battle, a formidable weapon of warfare. The medicinal action of the juice is that of a diuretic.

Niu is the Hawaiian name for the cocoanut. The expressed oil of the pulp is used. At one time it was believed to have a similar action to cod-liver oil, and has actually been used both in Europe and America as a substitute. It is a prominent ingredient of the mixture under consideration.

The *Kalo-laulou* is a variety of the taro plant (*Arum esculentum*). Taro, pounded into paste, mixed with water, then again pounded and allowed to ferment, is called *poi*, and is the staple article of food among the Hawaiian people. There are good physiological grounds for its use in this compound. Arum possesses the property of stimulating the secretions, particularly those of the skin and lungs. In diseases where there is an irritated condition of the mucous membrane it is therefore indicated. In my own practice I have given *poi* to inebriates, and had it retained by the stomach when every other form of nourishment was ejected.

The fifth ingredient is the *pohe* or marshmallow (*Althæa*), and of course is purely a demulcent. The leaf of the plant is used.

The sixth and last is the *kokea*, or the sugar-cane. The juice is an agreeable vehicle, and united with that of the *pohe* forms a very good substitute for the official syrupus althæa of the United States and German pharmacopœias.

On the whole, after carefully analyzing this prescription, I am brought to the conclusion that the therapeutics of the kahuna are

sometimes pretty good, and that, in this instance at least, an acumen is shown equaled only by our own "shotgun" men.

There are still a great many Hawaiian medicinal plants worthy of mention. I will call attention to one or two more. The *Pohuehue* is a beautiful marine convolvulus which is found on all the shores of the islands. This is said by natives to be a sovereign cure for catarrhal ophthalmia, a disease very common in the tropics. Then there is the Kukui tree (*Aleurites triloba*), with its beautiful pale-green foliage and clusters of nuts. When roasted the nuts, with a little red pepper and sea salt, form a delicious condiment always eaten with the baked pig and baked dog at Hawaiian banquets. In olden times these nuts were used to give light, as they burn with a clear, soft flame; hence the English name of candle-nut. The medicinal use to which the kahuna puts this nut is as an application to chronic ulcers or extensive granulating surfaces which are slow to heal. The kernel and a few leaves of the koali are masticated together, and the pulpy mass, mingled with the saliva, is applied as a poultice to the sore.

The Hawaiian kahunas have other means of relieving pain or effecting cures; such, for instance, are the *puholoholo*, or steam-bath, and the *lomi-lomi*.

The steam-bath is prepared by heating a quantity of stones in a small pit or hole. When the stones are thoroughly heated, the coals and ashes of the fuel are raked away and wetted leaves of the koali are placed upon the hot stones. The patient squats over the pit, his body enveloped in a *tappa*,* or large native cloth, until he is covered with a profuse perspiration. He is then taken to his mat, rubbed dry, and wrapped in a fresh tappa. This is a common treatment for fevers and for bad colds.

The *lomi-lomi* is a very ancient and famous practice among the Hawaiians, and consists of a complicated kneading, rubbing, and pinching of the skin and muscles of the body, and is considered quite a luxury. Those suffering from nervous headaches, myalgias, soreness and stiffness after overmuch physical exertion, etc., find the lomi-lomi very soothing and agreeable. The steam-bath followed by the lomi-lomi is a very good substitute for the Turkish bath, so popular in Europe and America.

* *Kappa*, or *Tappa* as it is more often called, is native cloth made from the inner bark of the mulberry bush (*Morus papyrifera*). It varies in quality from a very thick, heavy article to a delicate, almost gossamer-like, fabric. It is stained various colors with native dyes. The tappa usually takes its name from that of the plant from which the dye is obtained.

Tappa-olena, a yellow cloth. *Olena* is the name of the turmeric plant, the root of which is much used for dyeing yellow.

Tappa-alaea, a red cloth. The *alaea* is red ocher found in the mountains of Hawaii. There are very many varieties of tappa, but limited space prevents their enumeration.

I have now reached the most difficult part of my subject, a partial description of the mystical rites or incantations of the kahuna. Very little is generally known about these rites, owing to the jealousy with which the kahuna guards his secrets and the reluctance of those who have taken active part in them to talk on the subject.

The ceremonies practiced are numerous. One is called the *kuni-ahi*, or ordeal by fire. It is used to discover the author of injurious incantation or of sickness. A dog, pig, or chicken is killed and dressed. A fire is now made near the sick person and covered with stones, which become heated. On these stones the offering is laid to broil, and in the meantime the kahuna mutters prayers to invisible spirits (*aumakua*), who are supposed to protect the sick one. When the flesh is cooked a small portion is eaten by the kahuna and the rest is left to be consumed by the fire. The priest now pretends to go into a trance and speaks aloud his visions, which are answers to his prayers. He is usually able to designate some one who has caused the sufferer's trouble. After this a new ceremony takes place in which prayers and offerings are made to the friendly spirits, asking that the trouble may leave the sufferer and fasten to the guilty author of all the woe.

Another ceremony is called that of the *Apu*, or the Cup. This is an incantation to discover whether sickness is due to some fault of the individual himself, some enemy, or to some outside influence over which the kahuna has no control. The apu is a cup made from one-half a cocoanut shell cut in the long diameter. After appropriate prayers to the gods, the cup is divided into four compartments by slender strips of the ki leaf (*Dracæna terminalis*). Now the awa which is to fill the bowl is chewed and prepared by young girls, as already described in the description of awa. When all is ready the kahuna chooses one compartment in the bowl for himself, a second is assigned to the sick person, the third is named for any suspected enemy, and the fourth is devoted to outside influences. The awa is now poured slowly and carefully into the bowl by one of the maidens. A number of air-bubbles form on the surface, and the last bubble to remain on top of the liquid decides the question. If the bubble is in the quarter belonging to the patient, then the sickness comes from within himself and should be amenable to Hawaiian medicines; if in the quarter named for the suspected enemy, his guilt is established; if in the quarter for outside influences, the kahuna is helpless;* if in the quarter belonging to the kahuna—ah! but the bubble never forms in his quarter! How he

*At the present day they usually decide it is *he mai hale*, or "white man's sickness," and send for a regular physician.

manages this delicate matter is a secret which has never been revealed. If it is discovered that the suspected enemy is the guilty party, then begin the rites of *anaana*, or praying to death. This is performed somewhat as follows:

A few scrapings of the *Kauila* and the *Kalaipahou*, both rare indigenous woods of Hawaii, are dusted into a bowl of awa and the bowl covered with the *tappa pa-u pa-u*, a red-colored native cloth. Then prayers are offered to the spirits of the woods—especially the *Kalaipahou*, the wood of the poison god—begging for the enemy's death, and the ceremony closes. Of course, the richly bribed kahuna's murderous work is accomplished later by the use of poison, secretly and at his leisure.

Charms are given patients by kahunas to keep off evil spirits after they have been exorcised. One is a long strip of ki leaf which contains five knots. This is worn around the patient's neck until it dries up and falls away. By the time this occurs the spirits are supposed to have retreated from the field, and the patient is safe. If a very persistent evil spirit is supposed to be about waiting to invade the unfortunate victim's interior, a string of *hala* or Pandanus tree fruit is kept in the house. When any bodily or mental symptom leads the afflicted one to believe an invasion is about to take place, he immediately chews a piece of the hala fruit, swallows a portion of the juice, and the rest of it he applies with his hands to his chest, arms, and shoulders, in the meanwhile hastily appealing in prayers to his own guardian spirits (*aumakua*) for protection. This usually baffles the evil one and he retires discomfited.

There is another method of freeing the victim of the evil spirits, with which his own imagination and the *kahuna anaana* have kindly provided him. Lahaina, where I live, is a Mecca containing two sacred and miraculous shrines. Kahunas all over the Hawaiian Islands send patients to these holy places, where they perform certain rites and free themselves from the machinations of their enemies. *Hanola* is the name of the first sacred spot. It is situated near the seashore, where there is a large flat stone in the ocean, a short distance from the beach. Any one can here be *partially* relieved of any curse upon him (provided one is sent by the kahuna after his own mystical rites are completed). He must go on a dark night with one blood relation as a companion, for no outsider must see what is done on this solemn occasion. Arriving at the beach the patient strips off his clothing, and prays to his gods for relief and protection. He then enters the sea, and kneeling on the flat stone dips his head and shoulders beneath the waters low enough to submerge his whole body. This he repeats five times, comes out, dons his clothes, and returns to the

house from whence he came. The next night he visits the second sacred place, and completes the cure. *Auwai-a-wao* is the name of this place, which means "dwelling-place of the water goddess." This is a lonely spot several miles up the Lahainaluna gulch. Here the same scene is enacted as on the first night, only the patient bathes in a fresh mountain stream instead of the salt sea. Now he is free from all evil spirits — until another enemy, mayhap, induces a *kahuna anaana* to work on him. From time immemorial, kings, queens, chiefs, and chiefesses, the highest born of the land, have secretly visited these places, inspired by the terrors of *anaana*.

There are other rites which are usually performed by members of a family, though, of course, through the teachings of the kahuna. A very interesting one is the *kahua-a-ka-waha*. If a patient is suffering from sickness which refuses to yield to the native medicines, and it is believed that it is not due to *anaana*, then it is concluded to be a vengeance inflicted by the *aumakua* for not having performed some duty, or as a punishment for lying or deceiving. Hence the expression *kahua-a-ka-waha*, which means "wrath or anger brought upon one by his own mouth or deeds." To propitiate the invisible power a ceremony is performed. A near blood relation of the erring patient, usually a mother, father, or sister, prepares a bowl of salt water, prays to the gods for mercy, and, at the same time, dips his or her fingers in the water and sprinkles it east, west, north, and south. Now the supplicant goes outdoors and throws the remainder of the water on the house roof, still constantly chanting the prayers for forgiveness and mercy. Then comes the final stage of the incantation. Two hen's eggs, wrapped in ki leaves, and six young shoots of the taro plant, are taken by the supplicant to a quiet place near the sick one's house, but where there is entire seclusion. A fire is built. The eggs, and the taro shoots, also wrapped in ki leaves, are laid on the coals and covered with hot ashes. When the eggs and taro are cooked the supplicant takes one egg and one taro shoot from the fire, and leaves the remainder to be consumed. The egg and taro shoot not burned are taken to the patient, who eats them during the recital of more propitiatory prayers to the *aumakua*, and the ceremony ends. If the patient recovers, the gods are appeased; if the patient dies, the crime is too great for forgiveness.

On many an evening, seated on a mat in some native house, I have learned of kahuna methods and heard tales of Hawaiian superstition. Listening to these stories in the twilight, when the awa bowl was empty, the food calabashes cleared away, and the social pipe in circulation, I have ofttimes been curiously reminded of certain customs of ancient Rome. The Hawaiians have their *penates* and their *lares*,

also their *lemures* and their *larvoe*. So I have, dreamily, likened the kahuna to the Augur and the Haruspex. But, perhaps, this was too great a flight of fancy.

In an article devoted to Hawaiian medicine it may seem strange little or nothing is said about Hawaiian surgery. The explanation is a simple one. In the true sense of the word there is no such thing. Boils and abscesses are poulticed with koali or some similar plant until spontaneous evacuation takes place, without regard to the unnecessary and disfiguring loss of tissue such a process nearly always involves. Broken limbs are poulticed, and unite without the least attempt to change the position into which the muscles have drawn the separated ends. The result is naturally healing with deformity. Amputations are never performed by kahunas. A hopelessly injured part rots away from the healthy tissues, leaving a granulating surface, when the strength and general health of the person permits. A Hawaiian objects to an amputation, not so much from fear of the knife, but because the injured member, separated from his body and away from his sight and control, is in constant danger from evil spirits. A lost toe-nail, a tooth, or even articles of personal clothing, are quite sufficient for a *kahuna anaana* to "work on" and cause death. A native is therefore very particular about his belongings, especially integral parts of his body.

The beneficial effects of rest in the treatment of fractured bones is understood. No attempt at extension and counter-extension is made. The limb, however, is usually bound with ki leaves to give it support and thus lessen pain and facilitate quicker union. The ki leaves, when properly interwoven and tied together, are cool and pleasant to the fevered member, and while they act as a support equal almost to a plaster cast, are never applied so tightly as to cause strangulation.

In modern times a new and feeble order calling themselves kahunas has arisen. These are simply Christian religious enthusiasts. They give no medicines, but simply sprinkle the sick with water which has been prayed over, and expect to perform all cures by prayers and faith. These, of course, are not considered in this article. It is of the ancient practice of Hawaiian medicine, as it still exists to day, I have endeavored to give an idea. And this subject, though far from being exhaustively or even adequately dealt with, I now conclude.

THE hospital building at the Iowa Institute for Feeble-minded Children at Glenwood burned recently. All of the fifty inmates were rescued. The loss was about $20,000.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE DISEASES OF FICTION.

A writer in the *Quarterly Journal of Medicine* has called attention to some of the peculiar diseases and some of the strange pathological conditions with which writers of current fiction still invest their heroes. In an age when good writing has come to be associated with precise knowledge and accurate description, this is somewhat to be wondered at. A genius like Kipling writes about a steam-engine or a yacht or an Indian jungle with equal facility and with an expert's exactitude of observation, and yet numerous and less distinguished writers of fiction still handle the facts of medicine as though they belonged to the black art of past ages or to one of the lost sciences.

The education of the general public on medical matters has of late progressed to an extent which would seem to demand its reflection in modern works of fiction. The general public now know that they have stomachs, livers, and other organs, and are apt to demand a scientific explanation of their diverse symptoms and even of their vague pains. Nevertheless, they will accept in their reading, without much questioning, the story of a young and beautiful girl screwed down in her coffin for three or four days, to be ultimately rescued by a young man who digs down with his finger-nails and rescues the maiden in her entranced condition, apparently without even the use of a screw-driver.

The uses of chloroform in fiction are almost universally peculiar. It is apparently sufficient to drop a few drops on a handkerchief and just allow the victim to catch a glimpse of the handkerchief, and anesthesia immediately supervenes. Then robberies, burglaries, and the carrying off of maidens become easy and practical exploits. Ether is seldom used in fiction. Nitrous oxide gas has apparently not been used, although it possesses great possibilities. The writer alluded to suggests a plot for an embryo novellette. A darkly-cloaked figure

stealthily follows an intended victim through the gloom of a somber forest, holding in his hand a half-ounce vial of condensed nitrous oxide gas, which is prevented from escaping by a cork stopper. He gradually gains on his prey, and then removing the stopper allows a well-directed spray of the crystal fluid to fall just over the head of the unsuspecting one, who, after a second or two, makes the whole forest resound with shrieks of demoniacal laughter. He staggers and falls, while the assassin throws away the vial and searches for an incriminating document on the body of the prostrate man. He fails to find it, but discovers a small prominence at the level of the vest pocket, and by this he knows at once that the document has been swallowed. Drawing out his penknife he plunges it into the distended bladder of the unconscious man, withdraws the document, and makes off, followed at an interval of a few yards by the narcotized person with the bottle of nitrous oxide in his hand.

A quite common incident for the story-teller to utilize is that of a young man who falls from his horse in the hunting-field and sustains a paraplegia. He is usually confined to his bed for several months after this accident, and is nursed by his fiancée with sympathetic tenderness until he recovers. Of course, the writer seldom alludes to what the nursing of a case of paraplegia actually means, and we hear little or nothing about the administration of enemas, catheterism, bedsores, paralysis of the sphincters, and other attendant affections. In fiction the prognosis of grave maladies often seems to be improved by their gravity.

Broken hearts are still current causes of death. To novelists the heart is indeed the central seat of the emotions. Angina pectoris sometimes accounts for a convenient demise.

Zola has introduced obstetrical events to the ordinary reader, and in his "La Joie de Vivre" gives a full account of delivery in a case of shoulder presentation. The affair can be understood to have considerable interest for the non-medical reader.

EDITORIAL NOTES.

The Doctor's Case-book.

The affair of a doctor's case-book getting into the hands of an auctioneer and being sold with other effects of the deceased directs attention to a possible source of trouble. The doctor's case-book should undoubtedly be buried with the doctor, but as this fate cannot always be secured for it, and lest it should fall into the hands of blackmailers, should not clinical notes in certain cases be made in terms only understood by their writers?

ITEMS AND NOTES.

YELLOW FEVER has begun to show itself in Havana.

EPIDEMICS of cerebrospinal fever are reported at Mannheim, Pa., and at Pana, Ill.

IN Prussia the sale of factory-made medicinal tablets at drug stores has been forbidden.

THE hospital for consumptives in Baltimore has been given $10,000 by Dr. B. F. Newcomer, of that city.

VIRULENT smallpox has simultaneously appeared in various parts of Germany, at Iserlohn, Hanover, and Moczalo.

THE number of American physicians attending courses in the University of Vienna during the past semester was 102.

THE Edinburgh School of Medicine of the Royal College had 1217 students in attendance during the recent winter semester.

THE newspapers of Chicago have announced Dr. Nicholas Senn as a candidate for Governor of Illinois on the Republican ticket.

STATISTICS show that since the development of the bubonic plague in India there has been a total of 250,000 deaths recorded there.

A LEPER settlement has been established in Porto Rico, under the direction of the military authorities, on a small island named Luis Pena.

THE Chicago Hospital now has an electric ambulance which weighs 1600 pounds and is capable of a speed of sixteen miles an hour.

PROFESSOR ROUX, of the Pasteur Institute, has informed the French Academy of Sciences that he has a new serum for the treatment of tetanus.

PHYSICIANS in Germany are fighting the Krankenkassen and trying to have laws passed restricting their membership to those with salaries.

PROF. FREDERICK KARL CHRISTIAN LUDWIG BUECHNER, the author of "Force and Matter," died at Darmstadt on May 1. He was born March 29, 1824.

THE official figures of the Treasury Bureau of Statistics show that there were imported last year into the United States 1,539,056,750 grains of quinine.

THE faculty of the Johns Hopkins Hospital is arranging for a branch of study this fall on tropical diseases, which will be in charge of Dr. William Osler.

AN inquest was recently held in London on the body of a man who had died of blood poisoning three days after being tattooed by an expert in that department of pictorial art.

AN act has been passed by the Illinois Legislature establishing a state colony for epileptics, the object of which is to secure humane, curative, and scientific treatment to those afflicted.

SIR THOMAS BROWNE, M.D., the famous sixteenth century physician and author of "Religio Medici," is to have a statue in his native place, the ancient cathedral city of Norwich, England.

THE death is announced of Surgeon-Major John Bowron, in his one hundred and first year. He entered the East India Company's service as a pupil in 1813, and became assistant surgeon in 1825, retiring in 1851.

THE German Reichstag is attempting to deal with the social question in a very emphatic manner. A bill is proposed which will punish by fine and imprisonment any person communicating to another a venereal disease.

THE late Sir William Jenner left an estate that is valued at nearly $2,000,000. The will contains the munificent bequest of $50,000 to the Royal College of Physicians of London, over whose fortunes he long and ably presided.

DR. MARTZ, who has just concluded a study of nearly 4000 criminals in the French army, says that his results go to show that the criminal soldier shows a better bodily development than his fellow soldier with no such atavistic tendency.

INSANE patients at Liège, Belgium, are placed in quiet villages and cared for in the homes of citizens, who receive twenty-seven cents per day for the food, clothing, and care of each patient. Only the harmlessly insane are admitted to the colonies.

EMIL BEHRING, together with a Dr. Ruppel, has applied for a German patent for a tuberculosis serum. His claim is: "A method for producing a highly poisonous and immunifying substance from tubercle bacilli, or from cultures of tubercle bacilli."

A WRITER in a German exchange makes the statement that a hypodermic syringe can be boiled without injury to the leather, if the piston and washers are first soaked in a two- to four-per-cent formalin solution from twenty-four to forty-eight hours.

THE King of Belgium, as sovereign of the Congo Free State, has sent $1000 to the London School for Instruction in Tropical Diseases. The Indian Secretary has also contributed $5000. The Liverpool School has secured Major Ross, I.M.S., as lecturer.

DR. JEAN HAMEAU is to have a monument erected to his memory by the French Government. Dr. Hameau, who was born in 1779 and died in 1851, is generally admitted to have been a forerunner of Pasteur, as he discovered and applied the principles of bacteriology forty years before his illustrious countryman.

WE learn from the *Archivos de la Policlinica* that the American commission charged with the study of yellow fever in Cuba has confirmed the existence of Sanarelli's microbe in the person of one of the patients at the Hospital Mercedes. If the report is correct, this will be the first time that Sanarelli's discovery has been confirmed in the island of Cuba.

A COMPLAINT having been made to the Saxon Government by the husband of a woman who had died in the Dresden Clinic for Women that a necropsy had been performed on the body without his sanction, the Minister of the Interior has ordered that in future no post-mortem examinations are to be made in hospitals without the express consent of the relatives.

THE North German Lloyd steamer *Lahn*, which arrived at New York from Bremen and Southampton April 13, was detained at quarantine because of the presence of thirteen cases of smallpox among the steerage passengers. The patients were transferred to the Riverside Hospital, and the remaining 270 steerage passengers taken to Hoffman Island for observation.

THE *Bristol Medico-Chirurgical Journal* for March tells us that the house surgeon of a London hospital was attending to the injuries of a woman whose arm had been severely bitten. As he was examining the wound he said: "What sort of an animal bit you? This is too small for a horse's bite, and too large for that of a dog." "Oh, sir," replied the patient, "it wasn't an animal; it was another lady."

A SHORT time ago a verdict of $10,000 was rendered against the owners and operators of the Roentgen X-Ray Laboratory in Chicago. A skiagraph had been taken to ascertain the exact state of affairs of a

stiff ankle from which the plaintiff was suffering. It was claimed that as a result of the examination necrosis ensued, requiring three separate amputations before the patient was entirely free from his trouble.

According to an exchange, some time ago J. Pierpont Morgan pledged $1,000,000 to the New York Lying-in Hospital for the erection of a new building, provided the managers raised an amount sufficient to complete its endowment. It is now announced that the desired funds have been secured and the new building will be at once commenced. Mr. Morgan has made an additional gift of two city lots adjoining the city property already owned by the hospital.

A man affected with leprosy at present, says an exchange, lives in Mecklenburg, Germany. He is a merchant who went to South Africa some eighteen years ago. Lately he lost health, and finding that the local physicians could not diagnose his case, returned to Berlin two years ago, where he was pronounced a leper. He lives in the village of Gehlsdorf, near Rostock, where he was allowed to buy a house separated from others. In the upper story of this he lives with his brother, while his mother with a servant lives below. In this way the authorities believe that they prevent danger of a spread of the disease.

According to the *Journal of the American Medical Association*, the board of health at Zurich, Switzerland, keeps a number of washable linen overgarments for the use of physicians attending contagious diseases—scarlet fever, diphtheria, etc. When the physician notifies the department of a case of contagious disease, he adds "coats desired," and the authorities send the overgarment directly to the house for the physician to put on when he arrives, and on leaving the sick-room he hangs it by the door and it is disinfected by the authorities when the case no longer needs attendance. Lausanne has had a similar arrangement for three years, which has proved very satisfactory.

The London correspondent of the *Medical Record* writes that the bill introduced into the House of Lords to prohibit medical practice by companies may be considered as sure to pass that august assembly. It has been drawn by the Lord Chancellor, and is one of the little bills of the government. Whether it can be piloted through the Commons is more doubtful, as, apart from the enormous amount of pressure there, some crank or other is likely to find objections. And yet the bill is so brief—a single clause—and directed against so palpable an abuse, that it may perhaps be allowed to pass. It is not quite the same with the pharmacy bill, as in that case trade enters into the question. It is well, therefore, that the bills have been separated, that both may become acts.

NEW PUBLICATIONS.

ELECTRICITY IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE NOSE, THROAT, AND EAR.

Dr. Scheppegrell has the honor of being the pioneer in bringing out a work devoted exclusively to electrotherapeutics for the oto-rhino-laryngologist. In no department of medicine, unless it be, perhaps, that of neurology, is a working knowledge of the nature and uses of electrical appliances so essential to success. Possession of the volume for a short period causes the special worker in these lines to wonder how he ever got along without this book.

The review of all the valuable literature pertaining to each subject is complete and exhaustive, and so arranged as to make reference to other works very convenient. The book is written in a candid and entertaining style, and is quite free from any hard-ridden hobbies.

Transillumination, cataphoresis, skiagraphy, and other subjects of recent interest are carefully brought up to date.

Electricity in the Diagnosis and Treatment of Diseases of the Nose, Throat, and Ear. By W. Scheppegrell, A.M., M.D., Ex-Vice-President American Laryng., Rhin. and Otol. Soc.; Vice-President Western Ophthalmologic and Oto-Laryngologic Ass'n; Late Asst. Surgeon to the Eye, Ear, Nose, and Throat Hospital, New Orleans, etc., etc. With 161 Illustrations; 8vo, pp. xiv + 398. Price, $4.50. New York: G. P. Putnam's Sons.

SAUNDERS' MEDICAL HAND ATLASES—EXTERNAL DISEASES OF THE EYE.

This is an exceptionally fine volume of a remarkable series. The illustrations are technically of a high order and lifelike in their naturalness. Each plate is accompanied by the history of the case, so analyzed that the reader is made to feel that, guided by one of the well known teachers of ophthalmology, he is brought face to face with patients in some great clinic. In the original informaton conveyed, as well as in the quality of the skilfully executed lithographs, the work is even superior to atlases costing ten times the price of this one. Indeed, the wonder is that such truly artistic productions, involving the expenditure of so much time and money, can be offered for sale at so low a price. The work is one which can confidently be recommended to the student and specialist.

R. W. G.

Atlas of the External Diseases of the Eye. Including a Brief Treatise on the Pathology and Treatment. By Prof. Dr. O. Haab, of Zurich. Authorized Translation from the German. Edited by G. E. de Schweinitz, A.M., M.D. With 76 Colored Plates and 6 Engravings. Philadelphia: W. B. Saunders.

THE TREATMENT OF SKIN CANCERS.

The author of this work has made a very meritorious effort to summarize the treatment of cutaneous carcinomata by other methods than operative ones. The fact that the treatment of these troubles is largely in the hands of unauthorized practitioners makes this little book of peculiar value to the practicing physician. The author has especially commented upon the caustic measures which experience has commended to him.

The Treatment of Skin Cancers. By W. S. Gottheil, M.D. New York: Published by International Journal of Surgery Co., 100 William Street; J. MacDonald, Jr., Secretary and General Manager.

INTERNATIONAL MEDICAL ANNUAL.

The seventeenth annual issue of this well known publication is in some respects superior to any of its predecessors. It contains 760 pages of reading matter, and is copiously illustrated with colored plates and half-tone engravings, besides the numerous illustrations accompanying the text. By process of repeated condensation and pruning this work has retained dimensions which make it much less awkward than some of the other works of reference. The various articles have been written by authorities eminent in the special subjects they discuss. The Annual will continue to be a most acceptable and almost necessary addition to the physician's library.

The International Medical Annual and Practitioner's Index. A Work of Reference for Medical Practitioners. Seventeenth Year. Price, $3.00. New York and Chicago: E. B. Treat & Co., 1899.

SERUM DIAGNOSIS OF DISEASE.

Dr. Cabot's work is a compilation in which is presented practically all that is known up to date regarding the phenomena of agglutination. The measurement of the clumping power of bacteria has been made a valuable aid in diagnosis of various diseases, and the subject is here presented in a form in which the reader can easily possess himself of such knowledge as exists. A large part of the book is taken up with the serum diagnosis of typhoid fever by means of the agglutinative reaction, which goes by the name of Widal. It will be interesting to the general reader to discover how extensively serum diagnosis enters into the detection of other diseases than typhoid.

The Serum Diagnosis of Disease. By Richard C. Cabot, M.D. New York: William Wood & Company, 1899.

ELEMENTARY PHYSIOLOGY.

This work is apparently intended to give an idea of physiology to those who had no previous knowledge of the subject. It is written in an elementary way and with the use of few technical terms. For students of general science the work will present an admirable outline of the subject with which it deals. It is also well fitted for use by that large circle of readers who, while possessing a fair amount of knowledge of most subjects, are densely ignorant regarding the structure of their own bodies and the actions which take place within them during life. The work is attractively written and copiously illustrated.

Elementary Physiology. By Benjamin Moore, M.A. With One Hundred and Twenty-five Illustrations. London and Bombay: Longmans, Green & Co., 1899.

MATERIA MEDICA FOR NURSES.

This is a simple and lucid explanation of the leading principles of materia medica. The first part of the book is devoted to the general consideration and classification of drugs, the second part to materia medica proper, and the third part to toxicology. The subject is treated in a style which will be found simple and comprehensible for beginners. The work may be commended to the attention of the superintendents of training schools.

Practical Materia Medica for Nurses. With an Appendix. By Emily A. M. Stoney Graduate of the Training School for Nurses, Lawrence, Mass., etc. Philadelphia: W. B. Saunders, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Technique of the Bottini Operation.

Ramon Guiteras (*New York Medical Journal*, April 29, 1899), in reviewing the steps to be taken in the Bottini operation, says that the patient should be placed on his back on the table, the bowel having been washed out. The fountain syringe should be hung on the wall to the patient's left, connected with the incisor. The battery should be placed on a stool on the left of the patient and within reach of the operator. Pass a catheter lubricated with glycerin into the bladder and wash it out by means of a large rubber syringe until clean. Inject a eucaine solution (four-per-cent) into the neck of the bladder and urethra by means of a urethral syringe. Inject six ounces of boric acid solution into the bladder and allow it to remain. Pass the incisor into the bladder. If it will not enter readily, put a pillow under the hips. If then it cannot be made to enter, give an anesthetic (laughing-gas preferably). Connect the incisor in the bladder by means of the cable with the battery. Turn the incisor so that its beak will point downward. Insert the left forefinger into the rectum and hook it over the base of the prostate. Pull the incisor forward until its tip is felt on or near the finger in the rectum. Withdraw the finger and take hold of the handle of the instrument with the same hand.

See that the contact screw is turned tight, and that the water is running through the cooling apparatus. Throw in the two cells and turn on the current to forty or forty-five amperes. Turn the wheel until the knife has gone forward and backward through the floor of the prostate. Turn the instrument at a right angle and cut through the upper or anterior part. Return the patient to bed. If followed by retention, pass a catheter and allow it to remain for one or two days. After-treatment: urinary antiseptics, diluents, and antispasmodics.

Surgical Hints.

The May number of the *International Journal of Surgery* contains the following surgical suggestions:

In the class of fractures in which there is detachment of processes and apophyses, we very often fail to get crepitus, as in transverse fractures of the patella, fractures of the olecranon and coronoid

processes of the ulna, and of the coracoid and acromion processes of the scapula.

The severity of the symptoms of intestinal obstruction usually bears a relation to the suddenness of the attack. The more sudden it is the worse for the patient, and the greater the need of immediate interference.

A truss for inguinal hernia is of no value unless the pad lies over the internal ring in a permanent position, notwithstanding the changes in posture of the body, and unless the pressure is just enough to hold the hernia, and no more or less.

In all intraperitoneal operations the rule is to move the bowels early, but if there is shock, with fast and irregular pulse and nervous disturbance, morphine is indicated at first, just enough to quiet the nervous system. After this has been accomplished the bowels may safely be moved.

It is a mistake to think that cancer of the uterus is always painful. If a suspicious growth is seen, the question of pain should not influence the diagnosis. Any flow of blood after the menopause demands immediate careful investigation, but cancer of the cervix has been observed in quite young women.

Treatment of Surgical Tuberculosis.

Hoffa (*Lancet*, April 8, 1899) draws attention to the treatment of tuberculous affections of the bones, joints, glands, and skin by inunctions of soft soap, a method which he has applied during the last twelve years in more than 200 cases. Other means, such as injections of iodoform, plaster bandages, etc., must of course not be neglected, but he found them more efficacious when they were combined with the use of soap. The patients' general state and appetite improved, and multiple tuberculous affections of the bones and joints healed completely. It is essential to use a very good quality of soap, of which from twenty-five to forty grammes is rubbed on the body from the neck to the thighs two or three times a week. After fifteen minutes the soap may be wiped off. The inunction is most conveniently done in the evening, as the patient ought to remain in bed for some hours afterwards. The soap is said to act by its strong alkalinity, for on becoming absorbed it neutralizes the lactic acid of the organism, the increased alkalinity of the blood stimulates metabolism, and in this way improves the general nutrition. An increased quantity of urine is passed during the treatment. A great advantage of this method is its cheapness, which makes it specially useful for poor persons for whom good food, sea air, and other therapeutical resources are not available.

Nerve Stretching in the Treatment of Varicose Ulcers.

At the meeting of the Paris Society of Biology, held on April 15, M. Chipault (*Lancet*, April 29, 1899), encouraged by the success he has met with in treating perforating ulcer by nerve stretching, suggested to the Society a new method of treating varicose ulcers by the same process. The treatment consists of two procedures: (1) Nerve stretching. Owing to the position in which a varicose ulcer most commonly occurs the nerve generally involved is the musculo-cutaneous, and sometimes also the internal saphenous. In stretching the nerve great care must be taken not to break it, for in a varicose subject the nerves of the legs are particularly friable. (2) The direct treatment of the ulcer. This is effected in two ways. In large ulcers where the surrounding skin is in an unhealthy condition, the ulcer is well scraped so as to transform a fetid wound into a comparatively healthy one. When the ulcer is small it is carefully disinfected, the edges are dissected away, and the whole wound is then approximated by silk sutures. The elasticity of the skin of the leg is considerable, but time must be given and the sutures tightened gradually. If this be done it will be found that the surgeon can close a wound which at first sight seemed far too large for such a result. Ulcers treated in this way often heal by first intention.

Transfusion of Normal Salt or Physiological Saline Solution.

J. P. Webster, in the May number of the *International Journal of Surgery*, urges the importance of the transfusion of saline solution in all cases where there has been great loss of blood from any cause. Time, says the writer, should be taken to disinfect the skin before introducing the needle, and the wound caused thereby should be sealed with collodion. He also advises to transfuse during operations where there has been even a moderate loss of blood, and where shock is present either before or after operation; also in all septic conditions where the patient cannot retain the saline fluid per rectum. Transfusion should be continued until the pulse is of good volume, and again renewed as soon as the pulse weakens. The solution should be hot—from 108° to 118° F. He also says that as a rule the intercellular method is preferable to the intravenous, because it is less complicated, requires fewer instruments, and, what is most essential, it can be administered by any nurse with perfect safety, as there is no attendant danger of overdistending the circulatory organs as in the intravenous method. The writer says he always uses rectal transfusions where there has been great loss of vital fluids through the rectum, as in typhoid fever, cholera infantum, summer complaint, etc.

Recovery from Gunshot Wound of the Brain.

Mr. A. E. Barker (*Lancet*, April 29, 1899) reported the case of a man who had attempted suicide by firing a seven-millimeter revolver bullet through his palate into the skull. There was at first only a little hemorrhage from the nose and ptosis of the right side, without loss of consciousness. On the twelfth day he vomited, and on the twenty-eighth day there was hemiplegia. On the thirty-second day he was admitted into University College Hospital, London, with paresis of the left side. The patellar reflexes were increased and there was some vomiting, but there were no convulsions and no difference between the pupils. On the forty-second day the man's state had improved. By the Roentgen rays two bullets were seen, one being lodged in the corpus callosum and the other on the sphenoid bone. On the sixty-fifth day the patient had a severe epileptic fit, preceded by giddiness and loss of consciousness. On the sixty-eighth day two fits occurred with convulsions, especially of the left side. On trephining it was found that there was considerable intracranial pressure, and the bullets were removed. After the operation paresis of the left side returned, but became better on the following day. The patient is now apparently recovered.

Epithelioma of the Penis.

Jonathan Hutchinson, in *The Lancet* of April 22, 1899, says that when cancer of the penis is left to itself it kills either by hemorrhage or by infection of the lymphatic glands in the groin. The all-important point is to recognize the cases before the lymphatic glands have become adherent to the vessels, and not to mistake them for cases of primary chancres or tertiary growths, or for warty growths. A careful microscopic examination ought to settle this point, and if any doubt remains, then the prepuce should be slit up. If these things are carefully done it may make a difference of many years of life to the patient.

Loose Cartilages of the Joints.

Recently before the Berlin Surgical Congress (*Lancet*, April 29, 1899) Konig read a paper on loose cartilages. He had seen seventy cases of this condition, eight of them being caused by arthritis deformans and sixteen as the result of injury. With the exception of ten cases, all of them involved either the knee or the elbow. The great majority of the patients were young, and all of them with the exception of three were of the male sex. There are as a rule rheumatic pains in different joints. The function of the joint is deranged,

the power of extension being especially interfered with. In the first stage the adventitious body is attached to the cartilages so that it is sometimes difficult to remove it; in the second stage there is only a loose connection with the cartilage, and finally no connection at all. In rare cases the free bodies may be absorbed. The etiology of the condition is not entirely known. Sometimes it follows injury; but in experiments made upon dead bodies Professor Konig did not succeed in loosening any cartilaginous fragments. The diagnosis is made easy by skiagraphy.

MEDICINE.

Abuse of Iodine.

The editor of the *Philadelphia Medical Journal*, No. 3, 1899, says that in spite of all that has been written and said in regard to the uselessness and possible harmfulness of the indiscriminate use of the tincture of iodine, it continues to be used for all sorts and conditions of ailments and injuries.

Does not the tincture of iodine produce a local inflammatory condition? And will it not tend still further to aggravate the local inflammation which already exists in the case of the boil or the superficial abscess? Is it not rest and massage that are needed in most cases of sprain, whether it be of the ankle or the thumb? How much more rational to aid Nature to get rid of the tissue which is already damaged by infection beyond the possibility of repair, in the case of a boil or abscess, by softening the tissues by the application of an antiseptic poultice; and how much more likely to aid repair in the case of the sprain is splinting or strapping with adhesive plaster to give the parts rest. Blistering the skin with a heavy coat of tincture is often practiced in the early treatment of appendicitis, to the disgust of the surgeon who has to operate later.

Paroxysmal Hemoglobinuria.

At the Vienna Gesellschaft der Aerzte, Neumann (*Medical Press*, April 12, 1899) showed a patient, aged twenty-eight, who was received into hospital four years ago on account of syphilis which has manifested itself on the mucous membrane and skin several times since that time. About a year ago, for the first time, he passed urine of a dark-brown color after a sharp febrile attack. In December last he came to the hospital, as these febrile attacks began to recur about every three days, with the same result in respect of the urine. On February 27 he was admitted into Neumann's ward with a tempera-

ture of 40.6° C., or 105.8° F. The urine had the usual dark color and contained a large quantity of hemoglobin and its derivatives, but no red blood-corpuscles. Subsequent observations confirmed the history of a remitting disease usually recurring within from twelve to fourteen hours after a rigor, followed by a rise of temperature; then appeared pain in the joints with an ash-gray color of the skin. About three or four hours after these symptoms the patient expressed himself as feeling quite well, and the urine resumed its normal character.

The correct diagnosis of the proximate cause gave rise to a diversity of opinion, as paroxysmal hemoglobinuria may be produced by so many different agents, as a wide variation of temperature between heat and cold, drugs such as chlorate of potassium, diseases such as malaria, chronic syphilis, etc. Ehrlich, Schumacher, and others have demonstrated that antisyphilitic treatment is a common cause of paroxysmal hemoglobinuria, and this may have been the cause in the foregoing example.

The Toxicity of Tobacco and a Method of Eradicating It.

H. Stern, in an article in the *Medical Review of Reviews* of April 20, 1899, gives the method for overcoming the toxicity of tobacco which was originated by Professor Gerold, of Halle.

The originator employs for eight kilogrammes of tobacco leaves, containing the average percentage of nicotine, a decoction which is prepared thus: Fifteen grammes of tannic acid is boiled with one and one-half kilogrammes of water until the weight is reduced to one kilogramme; then thirty grammes of the essential oil of *Origanum vulgare* is added, after which the decoction is immediately removed from the fire. Having stood for some minutes, the mixture is filtered and allowed to cool to about 16° C., when the preparation is ready to be spread over the previously weighed tobacco. When the absorption of this mixture by the tobacco leaves is completed, they are subjected to slight pressure and moderate heat, after which they are ready for the manufacture of the diverse tobacco products.

Dr. Stern has repeatedly tested the efficacy of this method by giving cigars made from tobacco which has been treated in this manner to patients markedly idiosyncratic against tobacco, and they exhibited no ill effects whatever.

Acromegaly.

Drs. Mitchell and Le Count (*New York Medical Journal*, April 29, 1899), from their study of this affection, are led to the following conclusions:

1. The cases of acromegaly associated with true tumor of the hypophysis are certainly not as numerous as has been heretofore supposed.

2. There is not as much constancy in the pathologic condition of the hypophysis as there is in an enlargement of the heart, the thyroid gland, or the sella turcica.

3. Acromegaly does not depend, at least not solely, upon abolition of any function of the hypophysis.

4. A relationship between the thyroid gland and the hypophysis has already been amply proved.

5. It is not at all improbable that proliferation of the histological elements of the hypophysis may be instituted in some cases by a primary enlargement of the sella turcica; in other cases, an edema or hemorrhage *in vacuo*.

6. There is no reason for supposing that enlargement of the sella turcica may not be as constant an occurrence in acromegaly as the changes in other bones, or that it might not take place from a similar cause or causes.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Syringomyelia with Grave Laryngeal Complications.

Drualt, in *Annales des Maladies de l'Oreille*, etc. (*Deutsche Medicinische Wochenschrift*), reports a case as follows: A young woman, twenty-two years of age, complained for six months of difficult respiration, amounting to severe dyspnea, on the slightest exertion. The laryngoscopic examination showed that the glottis closed well during phonation, but only opened slightly during inspiration, so that a space only two millimeters wide was free. The posticus paralysis then was decided. Besides this there was present a paralysis of the palate (with characteristic rhinolalia and regurgitation of food into the nasal cavities), and finally, widely distributed disturbance of sensibility over the greater part of the buttocks and upper extremities (absence of pain and temperature sense, with contact sensibility intact). Patellar tendon reflexes were exaggerated.

This symptom-complex shows the pathological signs of an organic lesion of bulbar origin. It cannot be a disseminated sclerosis, because the tremor attending attempts at voluntary movements, nystagmus, and scanning speech are absent. Amyotrophic lateral sclerosis advances further without disturbance of sensation, and hypertrophic cervical pachymeningitis causes severe pain. Therefore this case must by exclusion be diagnosed as one of syringomyelia.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

A Critical Summary of the Question of Fatty Degeneration.

Alonzo Engelbert Taylor, in the *American Journal of the Medical Sciences* for May, 1899, contributes a very masterly essay on this subject, in which he summarizes all the work which has recently been done by German experimenters, and concludes from his review of the subject: (1) That the formation of fats out of the proteids physiologically has not been demonstrated or made probable; (2) that the formation of fats out of the proteids pathologically has not been demonstrated. On the contrary the weight of evidence is against it and in favor of the conception of the so-called fatty metamorphosis, as infiltrations or formations of fat from carbohydrates. This position is provisional and not conclusive. The writer says that no one pretends to-day that the formation of fat from proteids is impossible. It has simply not been demonstrated or made even plausible, and future work must confirm or reverse our present conclusions.

PEDIATRICS.

UNDER THE DIRECTION OF CHARLES G. JENNINGS, M.D.,
Professor of Practice of Medicine and Clinical Diseases of Children, Detroit College of Medicine.

The Pathogenesis of Gastroenteric Disease in Infants.

John Zahorsky, in *Pediatrics* of May 1, 1899, says that putrefaction of intestinal contents may be controlled by dieting, and that the prognosis depends on the destruction of intestinal cells. A true infection of the intestinal wall cannot be cured by a particular diet or antiseptic, but must run a more or less definite course, when the tendency to recover spontaneously is present.

Enormous Doses of Laudanum Taken by an Infant.

W. F. Boggess, in the May number of the *Archives of Pediatrics*, reports being called to see a case of a child nine months old, not weighing more than eight or nine pounds, yet seemingly well nourished. He was informed by the mother that the child had had paroxysms of colic ever since it was three months old, and that she

had resorted to the use of laudanum to quiet it, as this drug was the only thing she had found which gave relief. On questioning her it was found that she had been in the habit of giving the child, during the six months that it had colic, from four to twenty drops of laudanum four to six times a day. The drug was not entirely withdrawn, but the quantity was reduced from twenty drops four to six times a day to two or three drops, as might be needed.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Neurology at the Recent Meeting of the Michigan State Medical Society.

Three important and practical papers were read at the recent meeting at Kalamazoo upon neurological topics The first, by the able and courteous superintendent of the Michigan Asylum for the Insane, Dr. W. M. Edwards, directed timely attention to the importance of the early recognition of insanity and the greater possibility of recovery where early and proper change of environment was sought and the cases placed under intelligent observation and treatment. He cited a number of senile and chronic cases which sought admission to the asylum only because some changed domestic conditions made it inconvenient to care for them at home. Too frequently the burden of care is shifted onto the State, from motives of family convenience rather than from any actual necessities of the case, and without reference to any possible benefits of treatment.

Dr. David Inglis presented most interestingly some thoughts upon the subject of moral imbecility, calling attention to this important class of cases, upon which the profession should be better informed, especially as the legal mind is much inclined to look askance at the existence of any such form of insanity. He cited a recent case, in which the principal committed a foul murder, which his congenitally defective make-up effectually made it impossible for him to adequately appreciate.

Dr. G. Carl Huber, of Ann Arbor, read a most valuable paper upon the minute anatomy of the sympathetic nervous system and its relations to the cerebrospinal system, detailing briefly the development by the histologists of the neuron theory, the fact that is now well established that the conveyance of nerve impulses is by contiguity rather than by continuity, that the peripheral terminals are of several

kinds, etc. The histologists now tell us that we must give up the old ideas concerning the part played by the cerebrospinal system in the innervation of unstriped muscular tissue — that, for instance, the former idea is now proved as erroneous, that fibers of the pneumogastric end in the heart and there play an important inhibitive function. For, says Dr. Huber, recent work goes to show most conclusively that all unstriped muscular tissue is innervated from the sympathetic and not from the cerebrospinal system. The connection between the two, however, is very close, fibers passing between the roots of the spinal nerves and the sympathetic trunk. Their intimate connection was gone into in detail, but the above will serve as the salient points of this most interesting paper.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

The Importance of a Thorough Examination of Patients.

E. E. Montgomery (*College and Clinical Record*, Jan. 15, 1899) points out in a clinical lecture the importance of a thorough subjective as well as objective examination of patients, taking as his text a case of uterine hemorrhage. There are many conditions that give rise to hemorrhage from the uterus, such as constitutional debility, anemia, diseases of the uterus and about the uterus, inflammation and infection of the mucous membrane, diseases of the ovaries, etc. In consideration of these many causes the physician must make a thorough examination of the case before giving a diagnosis. He must study the general condition of the patient and determine if chlorosis or anemia be present; then a vaginal examination is necessary. This may call for dilating and curetting the uterus. If this is insufficient, dilate and examine with the finger.

Malignancy may develop at any period, even in the young. A woman of twenty-two suffered from bleeding for two years. She was curetted; a month later the uterus was swollen and edematous, with increased resistance at one point. Dilatation by tents and exploration was advised, but the patient being somewhat better for a time, this suggestion was declined. Later, bleeding began and an exploration was made. This showed a number of small masses in the uterus with indurated bases. The abdomen was opened and an incision made in the uterus. The cavity contained many polypoid masses, but the indurated bases made the author fear malignant disease. The uterus

was removed, and examination by the microscope subsequently showed the growths to be carcinomatous.

Not long since the lecturer saw a patient of thirty-four who had profuse bleeding. She applied to a physician for examination, and he assured her she was having her change of life, which was premature in her case. A digital examination soon revealed a fibroid hanging from the upper part of the cavity by a pedicle. This was brought down by a tenaculum, twisted off, and the woman has been well since.

These cases are given to impress the necessity of thorough examination in such instances. The physician, by all means, should not be content without a thorough knowledge of the condition of his patient. If the patient objects to such a procedure, then one should firmly decline to be the attending physician for her. Do not temporize or trifle with these cases, and make a diagnosis without knowing exactly what is present. It may be the only chance for a radical measure to be efficient.

Yeast in the Treatment of Blennorrhea.

A new treatment for vaginal blennorrhea is described by Dr. Landau in the *Deutsche Medicinische Wochenschrift.* His object was to discover a method which without being deleterious to the patient would nevertheless be capable of destroying gonococci and their toxic products. In his experiments he acted upon the principle of substituting for the gonococci cultures of other microorganisms of a greater vitality and power of propagation, and he found that common yeast fulfilled these requirements. Of forty cases treated in this way the blennorrhea was completely cured in more than half, sometimes even after only one or two applications. In a second series temporary relief was effected, but the blennorrhea reappeared; in a third series the catarrhal affection was diminished; and in a few cases there was no apparent improvement, although the patients declared that they felt better. The yeast was obtained from a brewery, and after being diluted with a small quantity of beer, was injected into the vagina with an ordinary syringe and retained by a tampon closing the orifice of the canal. The injection was repeated after two or three days, and the treatment was continued for several weeks.

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ORIGINAL CONTRIBUTIONS.

THE PROBLEM OF INFANT NUTRITION.*

BY CHARLES GODWIN JENNINGS, M.D., DETROIT, MICH.

I have first to thank the Section in Medicine for confiding to me the selection of the subject for the annual address in Medicine and for the honor of presenting it to the Society.

It is not the object of an address of this character to announce to the medical world through the Society individual discoveries in pathology, experimental or clinical medicine; but rather to review and criticize the thoughts and works of others on some subject or correlation of subjects of immediate interest to the profession at large. From this standpoint I believe that no apology is necessary for bringing before you at this time the problem of infant nutrition.

Compared with some of the great problems of pathology and therapeutics of the last few years, this may seem to some trite and commonplace, but to the physician who thoughtfully studies the pathology of the early life, the direct relation of infant nutrition to infant mortality and morbidity, and more remotely the relation of infant and child nutrition to the physical well-being and longevity of adult life, the problem of proper nutrition of infants and children reveals itself as one of the most important questions before the profession to-day.

Vital statistics tell us plainly of the excessive mortality of infant life. In Detroit, for the year ending July 1, 1898, thirty-five per cent of the total deaths were under the age of five years, and twenty-five per cent under the age of one year. Most of the deaths under one year are due to nutritive disorders directly or indirectly the result of improper feeding.

*The address in medicine read before the Michigan State Medical Society.

That this terrible mortality rate is to a great extent preventable is shown by the experience of physicians in private practice. In the presidential address before the American Pediatric Society in 1898, Dr. L. Emmett Holt stated that "of 151 children, who during the past eight years have been under my care through practically their entire infancy, not one died before reaching the end of the second year. This is still more significant when we consider how they were fed: only thirty of the number were breast-fed, either by the mother or wet-nurses, through the greater part of the first year; thirty-three were partly nursed and partly fed, nursing being usually continued for two or three months alone, after which the bottle was added; ninety were entirely bottle-fed. This certainly makes a good showing for artificial feeding and indicates very clearly that among the class of people where artificial feeding can be properly done it is extremely satisfactory."

From inquiry among physicians in New York in the same field of practice, Dr. Holt further concludes that "in the well-to do classes, with the best care, the mortality from all causes during infancy does not exceed two or three per cent, as against a general mortality for this period among all classes of about twenty per cent. These are most hopeful signs and show the possibility of a very great reduction in infant mortality everywhere with the better understanding of all conditions, but especially of infant feeding."

The effects of a pernicious diet do not cease with infancy. A child may rally from an infancy made wretched by continuous indigestion, but he survives to pass a puny childhood, and he reaches adult life imperfect in physical development, and finds himself in the full current of life's occupations, struggling for preeminence among his fellows, with an indigestion that shortens his endurance or impairs his judgment or temper. Thus the bilious attack of infancy and childhood becomes the sick-headache which takes many months from the activity of adolescence and early adult life, and in later manhood is to be exchanged for gout or arteriosclerosis, with their long train of pathological events that cut life short or make a burden of the declining years.

The necessities of modern urban life have imposed upon childhood the mental strain that should come only with mature years. Indoor life, with long hours of school study and the strain of frequent examinations, have replaced rural freedom and the easy-going, healthful method of the country school. Abundant exercise and rugged health flout at dietetic indiscretions and excesses, but when all the nutritive functions, handicapped by the defective excretion that comes with lack of sunshine and exercise, are strained to supply an overworked

brain, only a diet well balanced in its ratio of fats, carbohydrates, and proteids, and adapted in quantity, quality, and digestibility to the needs of the individual child, can save him from nutritive disaster.

Rotch recognizes in childhood three nutritive periods: The first period consists of the first twelve months; the second period includes the second and third years; and the third period the remaining years of childhood.

For the first period the natural food of the child is its mother's milk, and when this is abundant and of proper quality, the problem of nutrition for this period is settled; or a wet-nurse may be a satisfactory substitute for the mother.

In the absence of the milk of the mother or a wet nurse, the problem is one of substitute feeding. To the question of substitute feeding will be devoted the bulk of this address. From the results obtained by Holt (quoted above) and by others who represent the best modern knowledge of infant dietetics, it would appear that the problem of substitute feeding was fairly well solved. The working details of infant dietetics would here be out of place, and I shall endeavor to place before you only a brief *résumé* of the evolution of infant dietetics and to outline the principles which underly success.

American physicians have been foremost in the study of infant feeding, and it is to them chiefly that the profession is indebted for a system that is scientifically correct and clinically successful. Jacobi, Meigs, J. Lewis Smith, Rotch, Holt, and Starr are among those who have been the leaders in this line of investigation.

The perfect adaptation of the mother's milk to the child's nutrition has always been patent to the most casual observer, and it has been the aim of all investigators in infant feeding to produce a food that would represent in its digestibility and nutritive value woman's milk. In the early analyses of milk imperfect analytical methods gave misleading results, and these have been responsible for many of the mistakes of the past. Cheadle, a prominent English writer, as late as 1894, deduces his scheme of diet from analyses of human milk that are greatly at variance with those of Meigs, and the accepted results of investigators since his time.

The younger Meigs employed improved methods, and as early as 1882 published results that have stood the test of later investigations. Writing on this subject at this time he says: "I wish to be clearly understood as believing that the figures of Vernois and Becquerel and their followers are totally wrong, and that deductions from their results are largely accountable for the fact that at the present day so many young infants are fed upon cow's milk, pure, which contains an amount of casein their stomachs are unfit to digest; and I further

believe that if physicians in general could be taught to know that fresh cow's milk properly watered, with cream and sugar added in due proportions, is more like human milk than any other food at the present time known, many thousands of infants who now die would live to be men and women."

To again show how far behind American medicine in the subject of child diet were foreign authors, Eustace Smith, the most prominent English physician in his department, devotes no chapter to infant feeding in his book published the same year with that of Meigs.

The elder Meigs by clinical methods found that certain proportions of milk, cream, milk-sugar, and lime-water were best adapted to the average infant's digestion and nutrition, and with the aid of his son, Dr. A. V. Meigs, perfected the well known "Meigs's Mixture:"

Fat	3.50
Sugar	6.66
Proteids	1.21
Salts	.25

The most approved milk modifications of the present day are but perfections in the detail of their methods.

Jacobi early turned his able mind to the question of infant dietetics, and was one of this country's pioneers in this field of scientific infant feeding. Thirty-five years ago, almost before the discovery of microorganisms, he advocated sterilization of infants' food in his lectures and writings, and since that time a large part of his literary labors have been devoted to questions of infant diet and hygiene.

Bacteriology added a most important factor to the progress of the development of scientific infant feeding. Lister demonstrated that cow's milk as it comes from the udder is sterile, but with the ordinary dairy care quickly becomes infected.

In 1886 Soxhlet published his investigations advising the sterilization of infants' foods, and devised apparatus for sterilization and for feeding. Caille, of New York, introduced Soxhlet's teaching into the United States. About the same time Ernest, of Boston, was successfully feeding sick children on sterilized milk, and Rotch (1887) devised a simple steam sterilizer. Jeffreys, Eschevich, Brieger, Booker, and others studied the bacteriology of milk and of the infant intestinal contents. Their researches and more modern study of infantile diseases have demonstrated that the gastroenteric diseases of infancy and some of the acute infections are the result of infection through the medium of the food.

Sterilization destroys microbes, and it is for this purpose and for no other that infants' foods are subjected to this process. It is but a

single factor in the development of a suitable infant's food, but too often it is considered the one essential feature.

Rickets, scurvy, and other nutritional diseases have been attributed to the use of sterilized milk; confirmatory evidence that these diseases are so produced is as yet wanting. Pasteurization at low temperature (160° F.) offers similar protection against the introduction of germs, and this process is advocated by some of our best authorities as a measure that is free from some of the actual and supposed objections to sterilization.

While further clinical experience is necessary to determine the relative advantages of sterilization and Pasteurization, we must look upon the introduction of these processes as one of the most important factors of modern successful infant feeding.

The labors of Dr. T. M. Rotch, of Boston, have given to the profession the most recently developed factors in the art of successful infant feeding. The work was perfected with the collaboration of Mr. G. E. Gordon, a dairyman of wide experience. The method of Rotch aims to effect a recombination of the fats, carbohydrates, and proteids of cow's milk, so as to produce mixtures yielding any desired percentage of each of these essential ingredients. While mother's milk is to be taken as the type of what such a mixture should be, it is possible by this synthetic process to vary the percentage of any or all of its three elements to meet any desired modification.

Rotch followed the methods and results of Meigs, and in the article "Infant Feeding," one of his earlier writings (Keating's Cyclopedia, 1889), he recommends the Rotch mixture, a modification of the Meigs mixture, imitating more closely the composition of the average woman's milk. Rotch's mixture has the composition:

Fat	4.
Carbohydrates	6.26
Proteids	1.11
Salts	.21

Clinical experience has shown that a single combination of fats, sugar, and proteids, like either Meigs's or Rotch's mixture, was adequate neither for the nutrition of all infants of the same age, nor for that of a given infant at different ages.

Rotch's work further included extensive researches into the composition of cow's milk and woman's milk in numbers of individuals, and under all conditions. From these researches it was shown that "human milk of normal quality, and proving to be equally nutritious to the special infants that are fed on it, may vary considerably in the percentage of all its elements and in the combination of these percentages;" and he presents observations on the effect of putting

healthy infants to wet-nurses, themselves nursing thriving infants, but with milk of different compositions, and he found that the "digestive capabilities of infants differ just as do those of adults, and that nature provides a number of varieties of good human milk adapted to the varying idiosyncrasies of infants."

With a knowledge of these facts it was plain that a system of infant feeding to be generally successful must be susceptible of a great number of chemically exact modifications. Each infant must be given the percentage of fat, sugar, and proteids that its nutritive peculiarity demands; that the physician in prescribing an infant's food should think in percentages of fat, carbohydrates, and proteids, modifying them to suit the age and nutritive demands of the individual child.

The fundamental principles of infant feeding which must be constantly borne in mind by the physician in his selection of an infant's food, and which form the basis of scientific feeding, are thus stated by Holt:

"1. The food must contain the same constituents as woman's milk, viz., fat, carbohydrates, proteids, inorganic salts, and water.

"2. These constituents must be present in about the same proportions as in good woman's milk.

"3. As nearly as possible the different constituents should resemble those of woman's milk, both in their chemical composition and in their behavior to the digestive fluids.

"4. The addition to the food of very young infants of substances not present in woman's milk (*e.g.*, starch) is unnecessary, contrary to the best physiology, and, if used in any considerable quantity, may be positively harmful."

From a comparison of the chemical composition of woman's and cow's milk it will be seen that cow's milk contains all the elements necessary for the preparation of an infant's food, although they are not present in the proper proportion.

The average compositions, the results of the latest researches, which are used as the basis of the modification of cow's milk for infant feeding, are:

	Woman's milk.	Cow's milk.
Fat	4.00	3.50
Carbohydrates	7.00	4.30
Proteids	1.50	4.00
Salts	.20	.70
Water	87 30	87.50

Cow's milk, therefore, contains about the same percentage of fat, a great deficiency of sugar, and a great excess of proteids and salts.

The problem to obtain a food resembling woman's milk by the

modification of cow's milk is to *maintain* the fat percentage, *increase* the sugar, and *diminish* the proteids and salts. The composition of ordinary gravity cream is:

Fat	16.00
Sugar	4 00
Proteids	3.60

It contains practically the same percentage of sugar and proteids as milk, and is simply a superfatted milk. With cream, milk, and different percentage solutions of milk-sugar, any combination of fat, sugar, and proteids can be made; for example:

2 ounces milk,
4 ounces cream,
18 ounces 7-per-cent solution of milk sugar,

will give a food with an approximate composition:

Fat	3.00
Sugar	6.00
Proteids	1 00
Salts	.20

As stated above, clinical experience has shown the indigestibility of the casein of cow's milk even when supplied to the infant in the percentage that it exists in woman's milk. The fat also of cow's milk appears to be less digestible than the fat of woman's milk, and experience has shown that young infants demand food with a percentage of fat and proteid much less than is found in woman's milk; and it is not until they are six or seven months old that a modified milk can be given them similar in composition to woman's milk.

From these essential facts Rotch developed his series of formulas adapted to the nutritive demands and digestive ability of the average infant from birth to the end of the first year. Since Rotch's publication minor modifications of his formulas have been made by different observers.

Herewith is exhibited the series as modified by Holt, which the writer has found adapted to home modification, and which has proved eminently successful.

FORMULAS.

	Formula I. 1st and 2d days.	Formula II. 3d to 7th day.	Formula III. 2d and 3d weeks.	Formula IV. 2d and 3d months.
	Per cent.	Per cent.	Per cent.	Per cent.
Fat	.00	2.00	2.50	3.00
Sugar	5.00	6.00	6.00	6.00
Proteids	.00	.80	.80	1.00

	Formula V. 4th month.	Formula VI. 4th and 5th months.	Formula VII. 6th, 7th, and 8th months.	Formula VIII. 9th, 10th, and 11th months.
	Per cent.	Per cent.	Per cent.	Per cent.
Fat	3.50	4.00	4.00	4.00
Sugar	6.00	6.00	7.00	6.00
Proteids	1 25	1.50	2.00	2.50

To Rotch should be given the credit for perfecting a system of feeding that can be adapted to the digestive abilities of the feeblest infant, and which has proven to be one of the greatest advances in infant dietetics of recent years. Rotch's work is thoroughly scientific. It substitutes accuracy for guesswork, and teaches the physician always to think in percentages of fat, sugar, and proteids, and to adapt his food prescription to the individual infant. While his complete system of feeding demands the exact methods of a well conducted milk laboratory, and the entire control of the milk supply, it may be modified to suit localities, social conditions, and individuals. The scientific principles on which it is founded and the essentials of its detail must form the basis of all successful infant dietetics.

As an element of the artificial food of the infant under the age of one year, starch as found in one or a combination of the cereals has long held an important place. Modern authorities are somewhat at variance in their opinions of the age at which starch feeding should begin, and to what extent it should supplement or replace other carbohydrates in the food.

For thirty years Jacobi has advocated the dilution of the milk with decoctions of the cereals. J. Lewis Smith was a firm advocate of cereal addition, and many other able clinicians in this country and abroad have found cereals a useful element in infant feeding.

Tradesmen, ever on the alert to invade the domain of science, have given their powerful influence to aid the wide-spread use of cereals, and at the present time cereal feeding is the almost certain resort of the unadvised mother and the average practitioner. Infant physiology teaches that the amylolytic secretions of the salivary and pancreatic glands are not established in the early months of life. Nature supplies carbohydrates to the infant ready for absorption as milk-sugar. Amylolytic ferments are therefore unnecessary.

Salivary secretion begins at about the third or fourth month, and not until the latter months of the first year is an abundant and active secretion present. It has, however, been experimentally determined that a certain small amount of starch can be digested by even the

youngest infant. Jacobi's observations of results with the milk mixtures of Rotch lead him to think that for some infants they lack tissue-building properties — that the bones and muscles particularly form too slowly, and that this deficiency can be corrected by intelligent cereal additions.

From these facts it is but rational to conclude:

1. That cereals in great quantities should not be added to the diet of an infant under the age of one year.

2. That after the sixth or seventh month cereals in moderate quantity may be given in milk mixtures.

3. In the early months of life, while abundant domestic and professional experience shows that certain infants may thrive on, or perhaps in spite of, cereal feeding, it should be the rule to add cereals to the food only with the greatest circumspection and in the smallest quantity.

Cereals, then, form a most useful and often necessary element of the food in the latter part of the first year. Their composition and the limits of their digestibility and utility must be constantly borne in mind. To overwork the feeble developing starch-digestion apparatus in early infancy may be attended by the gravest results, not only immediate but remote. Overfeeding with starch is one of the most frequent errors in infant dietetics, and the chronic indigestion of infancy and childhood can usually be traced to it. And it is not improbable that the frequency of starch indigestion of adults at the present time is largely due to the irreparable damage done the amylolytic glands by prolonged overwork during the developmental period.

Directly related to cereal feeding is the subject of the artificial foods of the trade. Their place in infant dietetics must be determined by their chemical composition and properties. The published analyses of Teeds, Rotch, Holt, and others are accessible to all.

The principal foods in the market may be divided into three classes: (1) The farinaceous foods; (2) the malted foods; (3) the milk foods.

CEREALS.

	Wheat flour.	Oatmeal.	Barley flour.
Fat	1.00	5.50	1.00
Carbohydrates	81.00	64.00	81.00
Proteids	7.50	12.50	5.00
Salts	2.80	3.00	2.00
Water	9.00	15.00	10.00

Comparing the analyses in round numbers of three of the most frequently used farinaceous foods with the cereals, wheat, barley, and

oatmeal, it will be seen that these foods differ in no material way from the cereals. Comparing their cost it will be found that one pound of imperial granum costs on the market 75 cents; the best cereals from 5 to 8 cents. Critical examination shows them to be partially cooked, convenient, but very expensive cereals.

Ridge's Food.	Per cent.	Imperial Granum.	Per cent.
Fat	1.10	Fat	1.00
Carbohydrates, soluble	3.00	Carbohydrates, soluble	2.00
Carbohydrates, insoluble	78.00	Carbohydrates, insoluble	76.00
Proteids	12.00	Proteids	14.00
Salts	.50	Salts	.40
Water	8.50	Water	8.00

Analyses of the malted foods show them to be cereals changed somewhat in their composition, the chief change being the transformation of the insoluble starch into soluble glucose. The fat of the cereals has been mostly removed by the process of manufacture.

Mellin's Food.	Per cent.	Horlick's Food.	Per cent.
Fat	.30	Fat	.35
Carbohydrates, soluble	82.50	Carbohydrates, soluble	77.00
Proteids	10.70	Proteids	10.50
Salts	3.00	Salts	2.00
Water	4.00	Water	10.00

The addition of one of these foods to milk is practically but the addition of a soluble carbohydrate. Mellin's food costs on the market $1.25 per pound, milk-sugar 20 cents, cane-sugar 5 cents. While one of these foods may be a useful carbohydrate, it must be considered a very expensive one.

The milk foods reveal what they are by the study of their composition.

Nestle's Food.	Per cent.	Diluted. Per cent.	Malted Milk.	Per cent	Diluted. Per cent.
Fat	5.58	.76	Fat	2.66	.39
Carbohydrates, soluble	45.57	6.38	Carbohydrates, soluble	67.91	10.18
Carbohydrates, insoluble	29.95	4.19	Carbohydrates, insoluble	....	....
Proteids	11.04	1.54	Proteids	15 18	2.28
Salts	1.72	.24	Salts	3.34	.50
Water	1.50	86 89	Water	2 20	86.65

Glancing over the analyses of these foods, and the analyses of them as they are prepared for administration, the most palpable defect in them as compared to the perfect infants' food, woman's milk, is the serious reduction in the fat percentage. Fat is essential to tissue-building, and to the absence of fat in these foods can be attributed the rickets and other nutritional defects that so frequently attend their injudicious use.

The practicing physician finds that sometimes in difficult cases, or for the sake of convenience, they can be given alone or added to milk with benefit. When so used, with a full knowledge of their composition and nutritive value, they may replace the cereals in the latter months of the first year, but they cannot be what is always claimed for them, a perfect substitute for mother's milk.

The demands of nutrition during the second nutritive period are somewhat different from those of the first year. Tissue-building is reduced and muscular and cerebral activity assume prominence. To meet these demands there should be a gentle approach to the food of adult life. The time is too limited to more than touch upon the food problem of childhood.

A physiological child at the end of the first year is taking from forty to fifty ounces of a food containing four per cent fat, seven per cent sugar, and 1.5 per cent proteids. The perfect food of adult life contains three per cent fat, fifteen per cent carbohydrate, and five per cent proteids. To reduce the fat and increase the carbohydrates and proteids to meet the physiological demands of the child is the problem presented to the physician.

Among intelligent people the growing interest in infant and child diet and hygiene is manifested by the extensive circulation of special magazines and popular treatises upon these subjects. In a large experience in consultation, hospital and dispensary practice, I have found the general practitioner has not had his interest in these subjects aroused in equal degree. Because of the neglect of this subject by the rank and file of the profession, as well as because of its importance, I have addressed you upon it to-day.

In large communities certain practitioners with unusual opportunities and special adaptability have become specialists in diseases of children, but the infants who can be cared for by the specialist are few indeed. It is the family practitioner who must care for almost all of them. Every family practitioner, then, should be a specialist in infant dietetics. He has the ability and the opportunity; he has the clinical material; and he owes it to his patients and to the State to give to the infants confided to his care the benefit of a diet which will not only preserve their lives, but will permit them to reach adult life with vigorous digestions and perfectly developed bodies and brains.

TREPHINING FOR TRAUMATIC EPILEPSY.*

BY W. O. ROBERTS, M.D.,

Professor of Surgery and Clinical Surgery in the University of Louisville, etc., Louisville, Kentucky.

Case 1.—A young man twenty-one years of age was sent to me by Dr. Turner from Green county, Kentucky. Fifteen years ago he was struck on the head by an arrow with a loaded end, which had been shot up in the air; when it came down it struck him near the center of the top of his head, a little to the right of the median line. He was not laid up long following the injury. The doctor said his skull was fractured. This was treated on the expectant plan, and he had no trouble from it until about ten years after receipt of the injury, when he began to have epilepsy, and he has been having it steadily ever since, the attacks varying from one to three per week.

I exposed the surface of the skull beneath the scar and found there a depression. I did not know how deep this depression was, whether it went through the bone, whether it involved the inner table, nor what was the condition of the membranes beneath it. I trephined him, and in doing so the trephine opened the longitudinal sinus. The blood poured out of the opening, which I immediately packed with iodoform gauze, and the hemorrhage was arrested very readily. This packing was left in until the second day, when I removed it, and in doing so the bleeding recurred. It was repacked, and at the end of three days I carefully removed a portion of the gauze, part of it being allowed to remain; two days later it was all removed, and there was no further recurrence of the hemorrhage.

The man never had an elevation of temperature following the operation except once, and that was the day after the operation, when it went up to 100° F. He remained here two weeks, and at the end of that time the wound was nearly healed. He has had no recurrence of the epileptic seizures. What the final result will be I cannot say.

I was struck with the ease with which hemorrhage from the longitudinal sinus was arrested. This is the first time, in all the operations that I have performed upon the head, that the longitudinal sinus has been opened, and I was almost certain that I would open it in this instance; but from what I had read on the subject I felt satisfied that the hemorrhage could be easily stopped, and such proved to be the case.

Case 2.—This was a man aged twenty-six years, who fell some distance, his head striking against a rock. That was when he was a

* Reported to the Louisville Clinical Society.

child. Ten or fifteen years after receipt of the injury he began to have convulsions. These convulsions would frequently occur at night, and were always preceded by pain at the site of the wound. He said pain would start there and run over the head, then the convulsion would come on. He has been having these convulsions every day for several years.

I cut down at the site of the wound and found the cicatrix firmly adherent to the skull. This was dissected up, and I could then feel a decided irregularity of the skull, so I went on and took out a button of bone, thinking I might find some condition—possibly a splinter of bone or an exostosis of the inner table—to account for the trouble, but I did not, and the dura mater seemed to be healthy. There was some bleeding from a vessel in the dura mater, which was arrested with a suture of catgut.

The man has gotten along very well since the operation.

MEN AND THEIR AGES.

BY ROBERT BRUCE, CLINTON, N. Y.

"When can a man be said to be in his prime? Well, opinions on that point differ very widely," replied the Successful Practitioner, who is also something of a philosopher, to an inquiry addressed to him, not long ago, by a very personal friend, whose preference in conversation with his medical adviser is for topics intimately related to practical life. "Of course, much depends upon those factors which go to make up the individual life — health, character, and employment — which allow but slight range for the application of general rules, and place calculations, expectations, and statistics alike in the shade. When you say that a man is 'in his prime,' you imply that he is enjoying, and *using to advantage*, the maximum of his physical and mental powers. This period may be reached at any point beyond the first quarter-century mark, and likewise passed almost immediately, or prolonged for half a century. George Du Maurier once remarked in a private conversation: 'I think that the best years of a man's life are those of the forties.' The poet Young, however, viewed the matter from quite another standpoint, for he writes, with mingled philosophy and clever satire:

'At thirty man suspects himself a fool;
Knows it at forty, and reforms his plans;
At fifty, chides his infamous delay,
Pushes his prudent purpose to resolve;
In all the magnanimity of the thought,
Resolves and re-resolves; then dies the same.'"

"At forty or so a man may knowingly be more or less of a fool, but in the candor with self characteristic of sensible middle life there is little or no attempt to conceal the fact from one's own understanding, however much it may be shielded from outsiders," interrupted the visiting friend. "In my opinion the benefits of advancing age are obtained chiefly through increasing self-knowledge. Not that a consciousness of one's weaknesses necessarily leads to amendment, but the doing and saying of foolish things ceases to possess the old-time fascination of novelty, and such phenomena as 'headaches the morning after' begin to be ascribed to their true causes. When the allurements of folly no longer deceive, remorse begins to date back, and the general results of which the headache is typical are uniformly discounted. It is then that virtue scores her first out-and-out victories on the battle-grounds of the individual. The persistence of self-deception is, however, ingeniously illustrated by the fact that having thus finally turned aside from evil ways, the new recruit to the ranks of the consciously good usually claims the reform to have been the work of his own awakening conscience and power of will. He finds believers for such statements among the inexperienced and guileless, and sometimes half convinces himself of their genuineness by mere mechanical reiteration. It is well for him if such can be the case, for dissatisfaction with self is at no time more disagreeable than at ripe middle age."

"The realization of the departure of youth comes in many guises," continued the Practitioner. "Children are the most effectual reminders, although they serve to keep the man young if he permits himself the pleasure of their association and confidence. When the time comes that the father may conscientiously cease to pretend to know all things, there is a sense of relief. It is generally shortly after that he perceives that in some respects the younger generation is superior to his own. This better conveys the idea of age than long legs and the disposition on the part of the junior to appropriate the paternal neckties. Until one reaches rather advanced years, the association of knowledge and age is customary, and old habits cling despite keener insight into frailties and consequences. The discovery that one is really growing old not infrequently comes from a sudden realization that certain musty fossils (so thought), unpleasantly ancient, are in truth of equal age with the critic. One wonders why old Blanques has the 'nerve' to join with 'us' young folks until he learns that 'old' Blanques entered business or the professions two or three years after 'we' did, and is presumably that much younger. The sense of advancing age is more acute, however, before forty than after. The common belief of the boy of twenty is that forty-five is

old age, to which he scarcely hopes or expects to attain. At forty this period is moved along another twenty years or so, and as the limit of life is being closer approximated, there is a better chance for a correct estimate. There is a general willingness to succumb to the relentless conqueror—but some ten or twenty years hence. The refusal to believe that one or two years is sufficient time is quite as common among the hopelessly afflicted as among the strong and hearty. There is, however, now and then a brief period which marks an exception to this rule. Having achieved certain long anticipated ends, provision for dependents having been made, and affairs having assumed an unaccustomed orderliness, the extreme convenience of having the end come at such and such a time appeals to the individual with overwhelming force. In a few days, however, a new enterprise is undertaken, or sudden developments ingeniously deprive him of the supposedly excellent opportunity for a graceful demise, and his spirits immediately revive, for weeks, or months, or for years."

"The sensible man of forty has ceased to chase rainbows, and his pleasures are of a different order from those of his childhood and youth," replied the friend. "To him results are infinitely more than methods, and one measure of profitable fact worth forty measures of unstable fancy. I would add that, in order to fully enjoy the meridian and decline of life, it is desirable, perhaps essential, to have achieved before reaching that period at least a moderate success. Though it has passed into a proverb that 'to make money at forty is difficult,' yet business or professional life is by far the most interesting, natural, and satisfactory occupation for the ordinary American of middle age. These are the only games that will engross one's entire attention, and maintain a high interest to the end. Probably, if conveniences for the enjoyment of sport were more numerous in the United States, or if social life were more interesting, the number of men attempting to make a name or a fortune after the vigor of youth has departed, at the risk of their strength and nerve, would be much smaller. It is said that 'a good horse has saved many a man from wealth.' In continental cities, and in the rural life of the British Isles in particular, the employment of the middle aged is better provided for, in the former case by public resorts, art, and music, and in the latter by systematic field sports. In the older world business accommodates itself to these, since business *after* pleasure is the rule, though a radical departure from the adage."

"Both youth and age are looked upon in very different lights in Europe and America," answered the Practitioner. "Until recently the American people, like Dr. Faustus, almost worshiped the idea of youth. It was taken for granted that youth was the second gift of a

kind fate, riches, of course, being the first. It made little difference what use was to be made of youth; the fact itself was sufficient. It was considered almost as a national characteristic. To be young was to be 'American;' to be old or even middle aged was to be 'un-American,' and outside the pale of popular sympathy. To a certain extent this condition of affairs was rendered absolutely necessary from the corresponding and accompanying fact that youth deserved, from the American point and plan of life, all the attention paid to it; for our nervous way of existence, our high-pressure commercial systems, etc., leave us only the season of youth for the greatest activity. After thirty-five, or under the most favorable conditions after forty-five, the American man, and especially the American woman, ceased for all practical purposes to be a part of the present. He or she had become a 'has-been,' belonging to a class for which the average man or woman 'still young' had very little pity or sympathy, or even respect. Meanwhile, slowly but surely common sense and travel were modifying these unnaturally hard conditions. It was seen that abroad, especially in England, a man was about to really commence his career at the time he was obliged to think of abandoning it here. Instead of going up like a rocket between twenty and thirty, and coming down like a dead weight between forty and fifty, the Englishman usually progresses onward and upward year after year from thirty to seventy, and even to eighty, while the typical Englishwoman is in her glory at forty. At last the tide is turning, however, and the prejudice for mere youth against mere age is dying. It is observed that even business and professional men are learning the invaluable lesson of that repose which is perhaps *the* distinctive characteristic of life abroad. This repose is not mere form; it is, so to speak, the 'outward sign of an inward grace.' And with it go that care and system which do so much for European life. Doubtless in the early part of the twentieth century the two characteristics which have been so disagreeably conspicuous in the American temperament of the nineteenth century will partially disappear. It may even be, as Americans have a continued habit of carrying good things to extremes, that middle age with its experiences, and old age with its freedom from prejudices, will be even more highly appreciated in New York, Chicago, and Washington than in London, Liverpool, and Glasgow. We may then have our men who, like Gladstone, will be a power at eighty, and our women who, like Victoria, will set the example to their juniors after three generations of influence.

"It used to be said that the 'dead line' of professional men fell at fifty, but the wisdom of the past few years has extended it to sixty. It is true that any naval officer except an admiral must retire while he is

yet good for further service, but this stern practice has not been extended so rigorously to the professions at large. Practically the matter is regulated by the time when a man dies. Some men die at forty, others at sixty, and, paradoxically speaking, some do not seem to die at all. They may be old in years, but the vigor of youth yet remains, and they seem never to grow old. The rule enforced in an unwritten but sensible way is that a man should retire when he ceases to return a proper equivalent for his compensation, and many a man who finds at an early age that nobody desires his services has only to look to himself to discover the reason why. But if it were necessary to arbitrarily decide that men should retire from life's supreme activities at sixty, a great hardship would be imposed upon a large number who are not at all incapacitated for the best service. This hardship would fall heaviest upon those who are still under the necessity of earning a living for themselves and their families. In the nature of the case, most men are so placed as not to be able to leave off until their grasp is loosened. It is hardly fair to a man to take his time until he is at least twenty-five years old to fit him for the largest usefulness, and then give him but thirty-five at the utmost to turn around in it. He cannot get his place, either in his profession or in business, sometimes for years after starting on his career. And then, when he proves himself to be worth something, we are not ready to give him up, and it is my observation that the most useful men are in their prime, not on the decline, at sixty. Still there is reason in the expectation that when men have reached the limits of their usefulness they should retire to give place to other men who have patiently waited for the chance. More and more the busy world discounts those who have lost their grip, and the pathway of honest service is strewn with thousands who have proved to be unequal to the tasks laid upon them, and who can never again take up what they once essayed to do. This is but one expression of the relentless law of the 'survival of the fittest,' to which we all are subject. The aim of professional and business men should be, by conserving the energies of brain and heart and hand, to keep the 'dead line' ever in the distance, not in a happy-go-lucky forgetfulness of it, but in full knowledge of the nearer and nearer approach to it. In truth, this line, half real and half imaginary, ought to be moved farther and farther ahead, until it may seem to blend with, and become a part of, the horizon of life itself."

ACCORDING to recent statistics France, of all the European nations, consumes the largest amount of alcohol; next come the Belgians, Germans, English, Italians, and Swedes, in the order named.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

WHAT SHALL THE STANDARD BE?

There are two things which go to make the practice of medicine an uncertain art: the personal equation of the patient, and the unreliability of the remedies administered to him. The organic differences of individual constitution which go to form personal idiosyncrasy are largely outside the control of human agencies. There would, however, seem no good reason why some method of acquiring exactness and uniformity in pharmaceutical preparations cannot be achieved. The race has struggled with more difficult problems than this, and in this one there is nothing which should defy solution by human effort. The uniformity of standard which prevails in other branches of science is largely absent in the science of Materia Medica. The practitioner who writes a prescription for digitalis in a dozen different parts of the city will find in some instances that he obtains a drug which exhibits a satisfactory physiological action, and in others that no satisfaction is given. The administration of cannabis indica may be attended by no action at all, or it may produce hashish hallucinations. The use of a good many remedies has been practically discontinued on account of this unreliability.

The forthcoming revision of the Pharmacopœia would seem an opportune moment for insisting upon some definite standard being required. Scientific knowledge differs from ordinary knowledge in being quantitative rather than qualitative. Where, however, quantitative knowledge is impossible of attainment, qualitative knowledge is an extremely desirable possession. The ideal standard would probably be the chemical one, and those drugs capable of chemical assay should be required to exhibit their component substances in proportions of definite quantity and strength. The Pharmacopœia has already recognized the matter of chemical stand-

ardization and requires that cinchona, opium, and nux vomica shall comply with certain definite requirements. It is to be hoped that a number of other toxic and powerful drugs susceptible of chemical assay will be added to this list. There are, however, a large number of galenical preparations which are not as yet, and probably never will be, amenable to chemical assay. They may contain chemical compounds which are not susceptible of isolation. For these it might reasonably be thought some simple method might be inaugurated whereby it could be determined whether the drugs were capable of doing what was expected of them. Where drugs could not be standardized chemically they might be standardized physiologically. By complying with a few simple rules it might easily be ascertained whether the physiological principles of the drug were vitally active. It matters little how much crude ergot goes to the fluid pound of the extract if the product fails to produce a characteristic physiological action. The effect of the drug can easily be tested upon the lower animals. The physiological laboratory is nowadays furnished with instruments which facilitate all methods of precise observation.

The physiological unit has now come to be universally accepted in medicine in connection with the strength-standard of antitoxin. As a principle of applied pharmacology it has undoubtedly found a permanent place in the progressive technology of that science. Would it not therefore be wise for the purpose of securing that uniformity which is the basis of exact medication that drugs not amenable to chemical assay shall have their therapeutical value determined by conforming to a physiological standard? The remedies so standardized would at least have the merit of passing through the severest test human experience can devise, that of exhibiting the features of fulfilled prediction.

While the adoption of the principle of universal standardization by the Pharmacopœia is unquestionably a measure the consummation of which is much to be desired, there is a strong probability that, for obvious reasons, the Revision Committee may not see fit to recognize the principle in the next edition. Future generations alone may happily profit by the agitation in behalf of this change, now being conducted by leading scientific men, assuming, of course, that the profession is content to drift along in a state of irresolution and inaction.

Is there no help for those of us who must live and practice our art in the present day? Why should we be fettered by the traditional conservatism of the Pharmacopœia, rational though it may seem? The remedy is near at hand. We do not think that in this age of invention and progress it would be asking too much, or going one

step too far, if the medical profession should insist that the pharmaceutical manufacturer assay, or better, perhaps, "standardize," every powerful preparation which passes from his hands. American pharmaceutical establishments ought to be well equipped for scientific work, both as to plant and facilities. They are sustained by ample capital and presided over by men of marked executive ability. Why should these great agencies await the initiative of the Revision Committee? Let pharmaceutical manufacturers give us drugs that have been standardized, chemically or physiologically, as the circumstances may require. We believe they will do so cheerfully and with alacrity if medical practitioners, with one accord, will demand that standardized preparations be supplied upon their prescriptions. As hope-inspiring evidence that manufacturers are willing to cooperate with the profession in this particular direction we may cite the noteworthy fact that a few physiologically standardized preparations have made their appearance, and there is every reason to suppose that others will follow if the demand for them be unanimously and insistently voiced throughout the domain of scientific medicine.

EDITORIAL NOTES.

What is "Husa?"

Some little time ago a cock-and-bull story was told about a plant called "Husa," which was said to be a wonderful cure for the opium habit. Prof. John Uri Lloyd, of Cincinnati, has gone pretty thoroughly to the root of this matter, and has investigated a sample of "husa" obtained from the individual exploiting it. It appears to be nothing else than a concoction containing a large quantity of morphine. Any effect it may possess in the treatment of the opium habit apparently results from the "husa" given for administration being a graduated solution of morphine. Professor Lloyd defines "husa" as follows: "A solution of sulphate of morphine to be administered under the name of Husa and only by physicians. It is sold to physicians at the rate of $10 for about 234 grains of morphine. In support of this view I offer the foregoing testimony, and submit herewith the morphine obtained from twenty-five cubic centimeters of each liquid. Until I am furnished with a new plant containing morphine to the extent found in these experiments I shall accept Husa as a concoction." It was to be expected that there was a nigger in the fence somewhere, and Professor Lloyd is to be thanked for so carefully exposing the fraud.

ITEMS AND NOTES.

It has been decided to erect a bronze statue to Dr. Pepper, to be placed in the City Hall Plaza of Philadelphia.

A number of New England physicians purpose chartering a steamer for an excursion to the Paris Exposition next year.

Of the applicants who appeared before the Louisiana State Board of Medical Examiners on May 1 and 2, 16.66 per cent were rejected.

A bill was recently introduced in the Missouri State Legislature to change the names of the State asylums from lunatic asylums to hospitals for the insane.

The honorary degree of doctor of laws was conferred upon Dr. Nicholas Senn by the trustees of Jefferson Medical College at the commencement held May 15.

Dr. Schlatter, whose successful case of total extirpation of a cancerous stomach is well known, has been appointed professor to a new chair of surgery in Zurich.

In the future the physicians of the County Hospital staff, Chicago, will be required to give free expert testimony when so requested by the State attorney or by the coroner.

The Italian Government has intimated its intention of taking into its own hands the manufacture of quinine, from which certain factories in Genoa and Milan are making large profits.

Dr. Wm. Russell, of the class of 1826, and the oldest Harvard graduate, died last week, aged ninety-nine. He was a practicing physician and had never worn an overcoat.

A hospital ship has been presented to the Austrian Red Cross Society by the Baroness von Reinelt. The ship is completely equipped and has accommodations for 102 sick and wounded.

The Paris Medical Faculty has awarded the Lacaze prize for the best contribution to the study of typhoid fever to Dr. Widal, Professeur Agregé of the Medical Faculty. The value of the prize is $2000.

Dr. William Osler left Baltimore for London on May 31. As Cavendish Lecturer for 1899 he will probably select cerebrospinal meningitis as his theme, dwelling particularly on the investigations made during the present epidemic.

MARVELOUS tales are being published in Italian newspapers of an alleged cure for tuberculosis discovered by Prof. Vincenzo Cervello, professor of the Royal University of Palermo. Formalin administered hypodermically is the remedy.

THE *London Spectator* says that Lord Rosebery has perpetrated a *bon* or *joli mot*. Some one asked him what memory was. "Memory," said Lord Rosebery, "is the feeling that steals over us when we listen to our friends' 'original stories.'"

THE following, says the *Medical Record*, is more or less good advice for doctors: "Drink less, breathe more; eat less, chew more; ride less, walk more; clothe less, bathe more; worry less, work more; waste less, give more; write less, read more; preach less, practice more."

MR. ASTRAKOFF, a well known Russian engineer, lately deceased, has left 1,000,000 rubles towards the foundation of a University for Women in Moscow. The university is to comprise a mathematical, a scientific, and a medical faculty. The Council of the Moscow Government has voted an annual subsidy of 3000 rubles to the new institution.

A SHORT time ago a Sioux Indian, a student at the government school at Carlisle, Pa., died of measles. It seems he had received a short time before his death a letter from the Pine Ridge agency, South Dakota, stating that his brother and sister had died from malignant measles. It is supposed that the infection was carried in the envelope.

DR. BURNS, of Sunderland, England, who was called to a man who had attempted suicide by swallowing rat poison, found himself in a dilemma owing to his not being provided with a stomach pump. Nothing daunted, he is reported to have passed a tube into the stomach of the patient, and to have sucked out the contents, thus saving his life.

AT the competitive examination held at the University of Pennsylvania, Philadelphia, for five positions on the staff of Mercy and Roselia Hospitals of Pittsburg, eighty-five candidates presented themselves, representing Jefferson Medical College, Johns Hopkins College, College of Physicians and Surgeons, New York City, and the University of Pennsylvania.

THE *Journal de Médecine de Paris* of April 23 says that a young woman of Frankenthal, Hesse, was accused of infanticide; the infant

was supposed to have been thrown into the Rhine. The authorities sent word to the towns below along the river to search for the body of an infant. Each complied, and thirty-two infant cadavers were the result of the search.

WELLINGTON (New Zealand) has been visited by an epidemic of somnambulism. Scarcely a night passes without the public appearance far from home of persons in various stages of dishabille and irresponsibility. The curious thing is that they're all ladies. What with high winds, periodic earthquakes, and chronic somnambulism, the inhabitants of Wellington have much to contend against.

THE *Frankfurter Zeitung* relates an extraordinary story about Emin Pasha, the chief surgeon to the Sultan of Turkey. He is said to have been charged, on information given by his wife, with plotting against the Sultan. Although it is generally believed that the lady's action was prompted by the wish for a separation from her lawful spouse, it is thought likely that Emin Pasha will be condemned to lifelong banishment.

THE Montreal papers report the case of a lad who had lost the sight of one eye through having accidentally wounded it with a penknife. The other eye having recently shown sympathetic trouble, the removal of the sightless organ was advised and consented to. Through some inexplicable error the operator removed the sound eye, and so the total blindness which the operation was designed to prevent was produced.

GOVERNOR THOMAS, of Colorado, recently vetoed the bill regulating the practice of medicine. The bill practically limited the practice of medicine to three schools—allopathic, homeopathic, and eclectic. It provided for a board to control the licensing of physicians. Governor Thomas declares the tendency of the bill would be to form a physicians' trust, and would interfere with experimenting, which has given us all the knowledge we have of medicine.

THE late Sir John Struthers, emeritus professor of anatomy in the University of Aberdeen, left the University of Edinburgh $2000 to found an anatomical lecture, and his stock of anatomical drawings, many of them made by his own hand; $500 to the Edinburgh Royal Infirmary in memory of his association as a resident medical officer; and $2000 to the University of Glasgow to found a prize for original or special work in anatomical research.

ACCORDING to the *Journal of the American Medical Association* the French authorities are beginning to be disquieted at the decline in

the number of students from abroad enrolled in the French medical schools. In 1895 there were 1137 foreigners to 7779 French students, while in 1899 there are only 840 to 7429 French. Of this number over half are in Paris. The majority (630) are from Russia and the south-eastern countries of Europe. The United States has been represented only by 14 in 1896, 10 in 1897, 6 in 1898, and 1 in 1899.

THE German soldier used to be given only two meals daily, namely, breakfast and dinner. The latter meal was given at eleven o'clock in the day, and from that hour till breakfast the following morning he had nothing to eat except what he was able to provide out of his own pocket. On January 1, 1897, however, a step forward was made, and the soldier was given two evening meals in the week; the further additional meal for the remaining five days has now been granted, and in the future the German soldier will be served daily with a substantial evening meal.

THE late Mr. Benjamin F. Horwitz, of Baltimore, has left $5000, with directions that the legacy be invested and the annual income used to purchase a medal to be bestowed by the medical faculty of the Johns Hopkins University upon that member of the medical profession either in this country or abroad who has accomplished the most during the preceding year in ameliorating the sufferings of mankind in the way of medical discoveries. This bequest is left in honor of the memory of his own son, Dr. Eugene F. Horwitz, and is to be called the "Dr. Eugene Horwitz Medal."

ACCORDING to the *Journal of the American Medical Association*, through the beneficent gift of Mr. Justus C. Strawbridge, of Philadelphia, a bronze statue of Benjamin Franklin is to be erected in that city, the unveiling to occur June 14, the date of the commencement of the University of Pennsylvania, with which institution he was prominently identified during his life. From its foundation Franklin was always foremost in matters of health and numbered among his friends many physicians of his time who were instrumental in bringing the medical profession to the high station which it now occupies. Secretary Day, Nikola Tesla, and Thomas A. Edison will be invited to attend.

THE ninth annual meeting of the American Electrotherapeutic Association will be held in Washington, D. C., on September 19, 20, and 21, 1899, under the presidency of Dr. F. B. Bishop, of Washington. Quite a number of papers of great scientific value have been promised, and the Committee of Arrangements insures the members a very entertaining and pleasurable meeting. Aside from the sessions

of the Association, the committee has completed arrangements for a trip to Mt. Vernon, one to Arlington, and several other social features. The headquarters of the Association will be at Willard's Hotel, where special rates will be given to members and their families during the meeting.

ENGLAND'S marriage rate has, according to the *Journal of the American Medical Association*, arisen with increase of prosperity, as shown in the Registrar-General's annual report, just issued. It is the highest within the past twenty-one years. The point is made that the rate is always in touch with the value of wheat, exports, and imports. Nearly half the bachelors and spinsters were married between the ages of twenty-one and twenty-five, while the favored age for the remarriage of widows and widowers was between thirty-five and forty. In one out of every hundred of the marriages, husband and wife merely affixed their mark to the certificate. Another fact is also made apparent—young people, for the past twenty-five years, wait longer for the wedding.

ACCORDING to the *Journal of the American Medical Association*, Surgeon-General Sternberg has approved a plan for the establishment of a school at the Washington (D. C.) barracks for the instruction of hospital corps men in the preparation of food for the sick and wounded in the army. The work will be carried on under military regulations, with a view of organizing an efficient corps of men for the preparation of such food. The experiment is being made under the actual direction of Capt. W. F. Lippett, assistant surgeon. Capt. W. C. Borden, surgeon in charge of the hospital of the barracks, is cooperating in the work. Authority has been given for the employment of an expert civilian cook. In case the plan proves successful, similar schools will be established at other military posts.

ACCORDING to the *Spectator*, evidence that colds are infectious is furnished by what we observe among our domestic animals. Cats seem to be specially susceptible. Probably they often bring home from their nocturnal rambles those mysterious catarrhal attacks which so rapidly run through the house. It is an old saying, "The cat is sneezing, we shall all have colds." Sheep, too, are liable; a whole flock may suffer, and many show that curious eruption around the lips (herpes labialis) which we all know only too well as one of the most unpleasant accompaniments of a bad cold in the head. On the Australian sheep runs, when the shearing comes around, the men who congregate at the sheds are frequently smitten with an illness of a catarrhal nature, which rapidly takes hold of them, and often affects

some ninety per cent. Sometimes it becomes very serious, and may even develop into fatal pneumonia. To all appearance it is caught from the sheep.

According to the *British Medical Journal* a laboratory for the application of the Roentgen rays was opened in Madrid on February 20 under the name of Instituto Radiografico de Espana. The institute, the installation and equipment of which are on a magnificent scale, is said to have cost some two million pesetas (£80,000). We gather from the *Siglo Medico* that the impression produced by the size of the place, the luxurious manner in which it is fitted up, and the wealth of apparatus which it contains, on the large assembly of medical men and journalists who were present at the opening, was one akin to stupefaction. The director of the Institute is Dr. Mezquita. In view of the statements that have appeared as to the grave financial position of Spain, one can hardly help wondering where the large sum of money mentioned above was obtained; but however it may have been got, it must be admitted that it has been applied for a useful purpose. If money on a proportionate scale is forthcoming for medical institutions generally, Spain, even if she dies politically, according to Lord Salisbury's cheerful prognosis, has a vigorous scientific life before her.

In connection with a report of a case of vaginismus produced by tearing the hymen with the finger at the first copulation, Dr. Kalmikow relates in the *Vratch* the following custom prevalent in some parts of Russia: The proof of virginity is established by the finding of blood on the chemise of the bride after the first coitus. If she proves to be a virgin, the wedding celebration is especially joyful, and a red flag is hoisted on the house of the newly married, a similar flag being carried in the wedding procession. But if the bride sinned, the programme is changed, and insulting remarks are showered upon the bride and her parents. The question of virginity being the only one that determines the character and course of the celebration, the young couple are placed, immediately after the ceremony, in a room, the crowd standing at the door impatiently awaiting the result. The young husband is often instructed to tear the hymen with the finger, should he find himself unable to accomplish the act rapidly in any other way. If he fails even then, the best man comes to his rescue and performs the digital operation for him. After the act is accomplished, the friends make an expert survey of the blood-stain, and the result is communicated to the anxious parents. And this brutal act, the author remarks, takes place in the very midst of the clergy, teachers, and other intelligent people inhabiting these districts.

NEW PUBLICATIONS.

SAUNDERS' MEDICAL HAND ATLASES—DISEASES OF THE SKIN.

This atlas will meet with the same success as the others of the series, for the same care has been bestowed in the selection of the material and in the preparation of the work. Even greater success may be expected, as in no other disease is the importance of personal inspection of cases more readily recognized than in the study of cutaneous affections, and here the opportunity is offered to the fullest extent possible by means of well-executed colored plates which follow the text. With each plate a short history of the patient is given; his present state is described; the treatment used is briefly stated; and in those cases which have died the result of the autopsy is outlined; all of which brings the reader into closer relation with the subject-matter and enables him to gather definite knowledge. The text itself is clear, concise, practical, and modern, and the parenthetical notes of the editor render the work still more acceptable to the American reader.

Atlas of Skin Diseases. By Prof. Dr. Franz Mracek, of Vienna. Edited by Dr. Henry W. Stellwagen, M.D., Clinical Professor of Dermatology, Jefferson Medical College, Philadelphia. With 63 Colored Plates and 39 Beautiful Half-tone Illustrations.

APPLETON'S MEDICAL LIBRARY—TEXT-BOOK OF OPHTHALMOLOGY.

This work, the second American edition, which is an authorized translation of the seventh enlarged and improved German edition, will be welcomed by all interested in this most important branch. The earlier editions make it no stranger to us, although many alterations will be found in this edition, the most marked changes being met with in the sections on functional examination, the pathology of corneal and conjunctival diseases, and the diseases of the fundus.

The reputation of the author, perhaps the most widely known teacher of ophthalmology, with his pleasing style and originality, insures for the improved edition of this text-book, already deservedly popular, an increased demand. R. W. G.

Text-book of Ophthalmology. By Dr. Ernest Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized Translation; Revised from the Seventh Enlarged and Improved German Edition by A. Duane, Assistant Surgeon Ophthalmic and Aural Institute, New York. With 277 Illustrations. Second American Edition. New York: D. Appleton & Co.

BRUCE'S MATERIA MEDICA.

The author presents the subject of materia medica in a form that can be easily remembered. The work is chiefly therapeutical in scope and is intended to be a rational guide to the student and practitioner of medicine in the treatment of disease. The action and uses of remedies are fully discussed under a classification which is physiological, and the student is conducted from facts with which he is familiar to the great principles of treatment. The work is exceedingly conveniently arranged and forms interesting reading. The present edition is brought thoroughly up to date.

Materia Medica and Therapeutics. An Introduction to the Rational Treatment of Disease, for the Use of Students and Practitioners of Medicine. By J. Mitchell Bruce, M.D., F.R.C.P., etc., Physician and Lecturer on Medicine at Charing Cross Hospital, London. New (6th) Edition, Revised and Enlarged. In one 12mo volume of 618 pages; cloth, $1.50 net. Philadelphia and New York: Lea Brothers & Co, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Reinfection in Syphilis.

Not long ago the majority of authorities (*British Medical Journal*, April 15, 1899) denied the possibility of a second attack of syphilis. Ricord, in 1858, admitted that, theoretically, the syphilitic infection might become progressively attenuated and die out, and therefore that a patient might contract syphilis twice, in the same way as variola. Ricord, however, denied that this theory was supported by clinical evidence. Diday, on the other hand, in 1862 published a series of thirty-two cases of so-called repeated syphilis, and stated that a patient might contract syphilis several times, whether he had undergone complete disinfection and became infected afresh, or whether a virus of great intensity was added to the sum of infection in a patient incompletely infected by an attenuated virus. The divergence of opinion on this subject was increased by the fact that it was enough for a patient to develop an ulcer resembling a chancre in order to diagnose reinfection. Fournier, however, in 1868 stated that any syphilitic patient at any period of the disease might develop without reinfection ulcers resembling a primary sore, and pointed out that ulcers of the balano-preputial furrow are liable to inflammatory induration, which is often difficult to distinguish from syphilitic induration. Therefore, in order to diagnose true reinfection Fournier considered three conditions necessary: (1) An undoubted first attack of syphilis; (2) a period of quiescence, complete or interrupted only by tertiary symptoms, and having lasted several years; (3) a new infection characterized by a fresh indurated chancre followed by undoubted secondaries. Fournier, however, stated that he had never seen such a case.

Cases of what must be regarded as undoubted second infection in syphilis have, however, been recorded by Hutchinson, Zeissl, Ogilvie, and others, and more recently by Du Castel and Tarnowski. Du Castel's case was that of a man who, in 1892, was treated at the St. Louis Hospital for an indurated chancre, followed by a pustular secondary syphilide and mucous plaques in the throat. In 1897 he again presented himself at the same hospital with a second indurated chancre, which was followed by a typical roseola. Tarnowski's case was that of a man who was treated from 1886 to 1890 for various cutaneous syphilides and other manifestations of syphilis. In 1897 he contracted

soft sores, which were followed in due course by a typical polymorphous syphilide consisting of macular, papular, and pustular eruptions. One of Fournier's conditions, namely, that an indurated chancre must be present, if this case can be accepted, would be proved to be unnecessary. This will be the more readily believed by those who entertain the opinion that first attacks of syphilis are frequently followed by soft sores.

Surgical Treatment of Cholelithiasis.

A. Mayo Robson (*British Medical Journal*, April 23, 1899) says that as statistics from various countries and by many observers agree in showing the frequent association of gall-stones and primary cancer of the gall-bladder and liver, it is desirable that cases of cholelithiasis should be submitted to surgical treatment at an earlier stage than has hitherto been the custom.

In all cases of tumor of the gall-bladder, even if unaccompanied by symptoms, an operation should be advised, and the obstruction, usually a calculus, should be removed.

If these rules were followed primary cancer of the gall-bladder and extension to the liver would probably be less frequent.

If early operation in cases of tumor of the gall-bladder were followed out, even if cancer had commenced, it could be caught in an incipient stage, when a cure by cholecystectomy, or even partial hepatectomy, might be reasonably hoped for.

An exploratory operation, even in a patient seriously ill, with a localized tumor in the gall-bladder region, is worth advocating, though malignant disease be feared, in the hope that the disease may be inflammatory, and so capable of relief.

If there are any secondary nodules in the liver, or if adjoining viscera are invaded, the operation had better be terminated as a simple exploratory one.

Injections of Cocaine into the Medulla.

Professor Bier (*Medical Press*, May 10, 1899) has made some interesting experiments on the anesthetic effects of cocaine injected into the spinal cord. Up to the present two methods only were known of producing anesthesia — that of inhalation of chloroform, ether, etc., producing general insensibility, and local anesthesia obtained by the action of cocaine or cold on the sensitive nerves of a limited region. Professor Bier has discovered a third or middle method by which two-thirds of the body can be rendered insensible, and leaving psychic faculties untouched. Convinced that the injec-

tion of a small quantity of cocaine into the rachidian canal would produce insensibility of the regions tributary to the nerves contained in that cavity, he injected hydrochlorate of cocaine into the rachidian canal of six patients with ages ranging from eleven to thirty-four years, and was able after this operation to perform without the slightest pain osseous resections and the opening of tuberculous abscesses. He proceeded as follows: By means of subcutaneous injections of cocaine he rendered insensible the lumbar region, and then practiced the tapping of the canal according to the method of Quincke with the aid of a very fine cannula; to this he adapted an ordinary Pravaz syringe, containing from one-half to a one-per-cent solution of cocaine, and of which he injected from ten to sixty drops, representing from one-tenth to one-third of a grain. In five or eight minutes after the injection the lower limbs were rendered completely insensible, and the anesthesia crept up the body as far as the sternum. The effect lasted forty-five minutes, and then gradually disappeared. None of the patients presented any uneasy symptoms, but three of them, however, suffered from vomiting and headache for a few days. All of them looked on, while being operated upon, with complete *sang-froid*, asserting that they felt no pain.

The Hernia Guarantee and the Minimum of Confinement after Operations for Appendicitis With and Without Pus.

G. M. Edebohls, in the *Medical Record* of May 13, 1899, has, as the result of his labors on this question, reached the following conclusions:

1. Sufficient attention has been called to the technique of the perfected operation for chronic appendicitis to render ignorance thereof inexcusable on the part of any one practicing abdominal surgery.

2. The technique for the operation for acute appendicitis with pus still forms a subject for discussion.

3. The value and universal applicability of the gridiron incision of McBurney in cases of acute appendicitis with pus, though dwelt upon of recent years by a number of American surgeons, are not in practice sufficiently appreciated.

4. Nor is the fact too widely known that the duration of confinement after operation for chronic appendicitis need not exceed a week, and may indeed be considerably shorter.

5. The duration of confinement after operations for acute appendicitis with pus, excepting cases in which fecal fistulæ form, need rarely exceed two weeks at the outside. Since putting into operation the technique above outlined, the longest period of confinement in the

writer's practice has been in one case fifteen days. In that case five separate intraperitoneal pus pockets had to be drained, and the wound was not ready for secondary closure until fourteen days after operation.

6. Hernia need no longer be dreaded after operations for appendicitis, acute or chronic, with or without pus.

7. There seems to be no longer any good reason why all patients suffering from appendicitis, acute or chronic, should not have the benefit of operation.

Treatment of Inoperable Cancer.

C. H. Fraser (*American Journal of Medical Sciences*, May, 1899) says that of all the methods that have been suggested in the treatment of inoperable cancer, but one has had sufficient trial to warrant its recognition. The mixed toxins of erysipelas and bacillus prodigiosus have been employed by Coley himself in 148 cases, and by other observers in thirty-five cases. Of the 148 cases the treatment may be regarded as primarily successful in twenty-four, or fifteen per cent; and of the series of thirty-five cases, twenty-six disappeared completely. Two others decreased so much that only an insignificant node was left. These results are sufficient to warrant this form of treatment to be pursued in the strictly inoperable cases. Unfortunately but little success has been obtained in its application to cancer proper, the best results being reported in cases of spindle-cell sarcoma. The toxins have been used for a short time after operation with some promise of success as a prophylactic measure. The treatment at least rests on a logical and scientific basis, and inasmuch as so many authentic cases have already been recorded in which there has been no recurrence in three years, it cannot be ignored by the profession.

Deaths After Subcutaneous Injection of Mercury.

Mr. Hutchinson (*Archives of Surgery*, January, 1899) has been informed of a very lamentable result from subcutaneous injection of mercury in syphilis. There is a mixture of metallic mercury with oil known as Lambkin's solution, of some considerable repute in army practice, and with which no accidents seem previously to have been known. The surgeon who employed it had used it often with good results. On a certain day four soldiers suffering from syphilis were injected with the usual dose, all precautions being observed. Nothing unusual was noticed in the solution (which was freshly made), and when it was subsequently examined it appeared to have been properly mixed. Ten days later the men were injected for a second time from the same

preparation. At varying dates, from ten days to a fortnight after the second injection, all had the most severe salivation. Ulcers formed in the mouth and throat, and there was in three cases very profuse diarrhea. Under the combined influence of the diarrhea and stomatitis two died. Of the two others one is convalescent, and the other still in a somewhat critical state from necrosis of the lower jaw.

Foreign Bodies in the Pharynx and Esophagus.

Robert Jones (*Lancet*, May 6, 1899) says that from a study of his own cases of esophagotomy he would submit the following: (1) That bodies which have lain for some time and given rise to symptoms of obstruction, irritation, or dyspnea should be operated upon without delay; (2) that forcible attempts at extraction by the mouth are to be condemned; (3) that sharp or irregular impacted bodies specially demand esophagotomy; (4) that in certain cases gastrotomy is indicated, and in some a combination of gastrotomy and esophagotomy; (5) that where the wound in the esophagus is jagged or its walls inflamed no stitches should be used; (6) that the routine practice where the esophageal wound is clean-cut is to stitch it up with a continuous suture, care being taken, as in the case of the intestine, not to pierce the mucous coat; (7) that only in very exceptional cases where no danger of suppuration and infection exists should the external wound be closed; and (8) that liquid food may be given by the mouth in about twenty-four hours after operation.

MEDICINE.

Insufficiency of the Heart Muscle.

At the recent Congress of Internal Medicine held at Carlsbad, Professor Schrotter, of Vienna (*Lancet*, May 6, 1899), said that the heart possesses a reserve of energy by which it is enabled to support extraordinary exertions, but this stock of energy is sometimes inadequate, and then functional insufficiency ensues. Functional insufficiency may also be congenital or even hereditary. A nervous influence also unquestionably exists, as appears in the insufficiency caused by psychical emotion and in death from "broken heart." The heart possesses a very complicated system of motor nerves, which may be weakened by disease without alterations of the heart muscle. In the majority of cases, however, cardiac insufficiency is caused by anatomical alterations of the muscle, by parenchymatous or interstitial myositis following sclerosis of the arteries, or by acute infectious

diseases. Overexertion may produce permanent dilatation and insufficiency. Athletic exercises may be of such a nature and may be practiced in such a way as to have a deleterious influence. Overexertion of the heart muscle does not produce a sensation of fatigue similar to that felt in the muscles of the skeleton, but it manifests itself only by the occurrence of dyspnea and general debility. With reference to athletic exercises Professor Schrotter said that the heart muscle was more liable to be overstrained by mountain climbing than by cycling, gymnastics, swimming, rowing, or walking; riding was the exercise least likely to produce overstrain. Patients suffering from myocarditis should be careful of themselves even when they feel quite well.

Inconsistent Philozoists.

In his address (*Popular Science Monthly*) at the opening of the physiological and pathological laboratories at Belfast, Ireland, Lord Lister took occasion to give some illustrations, drawn from practice, of the value of pathological research. "There are people," he said, "who do not object to eating a mutton chop—people who do not even object to shooting a pheasant with a considerable chance that it may be only wounded and may have to die after lingering in pain, unable to obtain its proper nutriment—and yet who consider it something monstrous to introduce under the skin of a guinea-pig a little inoculation of some microbe to ascertain its action. These seem to me to be the most inconsistent views. If these experiments upon the lower animals were made for the mere sport of the thing, they would be indeed to be deprecated and decried; but if they are made with the wholly noble object of not only increasing human knowledge, but also of diminishing human suffering, then I hold that such investigations are deserving of all praise. Those little know who lightly speak on these matters how much self-denial is required in the prosecution of such researches when they are conducted, as indeed they always are, as far as I am aware, with the object of establishing new truths."

The Prophylaxis of Beriberi.

Beriberi, according to the *Philadelphia Medical Journal* of May 13, 1899, has come to be looked upon as a multiple neuritis, the origin of which remains undiscovered. It has long been thought to be due to some deficiency in the food, or possibly to be a form of intoxication, and improvement has usually followed change in diet. Practical confirmation of this view is afforded by the recent experience of a

French army medical officer in Siam, who observed a severe epidemic brought to an abrupt termination by the addition of a generous amount of fatty matters to the dietary. Some weeks later an even more severe epidemic among the inmates of the penitentiary was similarly influenced by a like regulation. It has further been found that beriberi has not reappeared in the Japanese navy with its previous frequency since a rearrangement of the naval ration. The disease may thus be compared with scurvy, both being preventable along corresponding lines.

THERAPEUTICS.

Valerianates of Creosote and Guaiacol.

A. B. Briggs (*New York Medical Journal*, May 20, 1899) from his experience in the use of geosote and eosote makes the following suggestions:

The eosote and geosote may be given with advantage in all cases of pulmonary tuberculosis.

It is non-toxic and non-irritating. The dose is very much less than that of creosote, from three to ten drops being as much as is ever required at a dose. From ten to thirty minims daily can be given with benefit in these cases.

The remedy always acts as a tonic; the appetite improves, the dyspeptic symptoms subside, the patient increases in weight, the cough, expectoration, night sweats, and physical symptoms improve, while the disposition to hemoptysis seems to be entirely under control.

On account of their disinfectant properties, fermentative conditions in the stomach and bowels, so often present in these cases, respond very readily and favorably to their use. Tuberculous enteritis, if present, is benefited, and self-infection prevented.

The well known sedative action of the valerianates is soon demonstrated after their administration, as shown by their beneficial action on the various nervous symptoms, frequently so pronounced in these cases.

The Treatment of Seasickness.

Dr. E. K. Losee (*Medical Record*, May 13, 1899), in a carefully written article upon naupathia, says that for the treatment of seasickness the Pharmacopœia has been recommended entire, which goes to show that there is no specific unless it be land. The remedies that have seemed to be the most efficacious are the nerve sedatives, and of these the bromides are the best. Chloral is another very good

drug and may be used alone or combined with bromide in doses of ten to twenty grains three times daily. Dr. Losee says that the proper treatment of a case begins before the patient goes to sea. If possible he should be perfectly rested and free from the worry of final details. Then if he relies on the bromides their exhibition should be commenced one to three days before sailing, in doses of twenty to thirty grains three times daily, until mild bromization is effected, and upon the sailing day a still larger amount should be taken. This may be all that is needed, depending upon the individual case. Bromides should not be taken in excess, as they may prove injurious, and the bromide of sodium is the best preparation. As to the treatment of the symptoms, the writer suggests a few drops of chloroform on sugar will sometimes relieve vomiting. Tincture of capsicum, well diluted, is another good drug. Alcohol should be avoided unless in a stage of exhaustion during the latter part of the attack. Do not take salines for constipation. The best laxative is compound licorice powder in full doses. Opium with some mild astringent may be given for diarrhea. In this way may be prevented — at any rate alleviated — the symptoms of that most distressing malady, naupathia, and often an ocean voyage robbed of half its terrors.

The Action of the Iodides.

Iodides when used in syphilis not only act as antisyphilitics, but, we are told by Dr. A. H. Smith (*Medical Record*, lv), as arterial dilators. Being such they not only combat the disease directly, but they render easier the work of a heart which has been more or less crippled by arterial fibrosis. He believes that the good they do in aneurism is due to their power to diminish arterial tension rather than to their antisyphilitic action. At the same meeting in which Dr. Smith expressed himself thus, Dr. A. Jacobi said that he had seen many cases of sterility, and of inflammatory thickenings in the female pelvis, which, although not syphilitic, had yielded gradually but surely to the persistent use of the iodides and of mercury. He had treated in this way many months at a time women who, through carelessness or otherwise at childbirth, had developed such a pathological condition in the pelvis that they had been advised by others to submit to the removal of the uterine appendages. Some of these women had not only recovered, but had subsequently borne children. From our knowledge of the action of these drugs in the non-syphilitic forms of hepatic cirrhosis and of tabes, it was evident that the improvement or cure following their administration did not necessarily mean that the pathological state had been brought about by syphilis.

Nothing was said at this meeting about how to administer the iodides in an agreeable form. The persistent unpleasant after-taste which they produce has never been properly overcome. One plan that works fairly well is to have the patient swallow the dose in concentrated form and follow immediately with a drink of milk. Some physicians have it taken in the milk.

The Treatment of Dysentery.

D. M. Ross (*British Medical Journal*, May 13, 1899) from his long experience in Jamaica says that in the treatment of this affection rest in bed is of paramount importance; as much rest for the alimentary canal as is compatible with a sufficient supply of nourishment; fomentations when necessary to relieve colic; removal and prevention of accumulation in the bowels, and relief of engorgement by the administration of ipecacuanha, magnesium sulphate, or castor oil; when it can be borne, lavation of the large intestine by warm injections of permanganate of potash or boric acid, followed if needful by starch and opium enemata to relieve tenesmus; when the stools become fecal, gradual substitution of intestinal antiseptics — bismuth salicylate or subnitrate, salol, resorcin, naphthol; if the ulcers appear to be slow in healing, astringent injections carefully administered; tonics, and, where possible, change of air.

Carbolic Acid in Tetanus.

H. C. Wood, in the May number of *Merck's Archives*, says that carbolic acid gives better results in tetanus than does the antitoxin treatment; that it acts by antagonizing the toxin and by quieting the nervous system. It should always be given hypodermically and in large enough doses, cases of tetanus being remarkably tolerant toward it. Other methods of treatment should be continued, of which the discoverer lays special stress on the local disinfection of the wound.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Pneumonic Sputum.

D. Ottolenghi, of Turin (*Centrlbl. für Bakter.*, etc., Bd. xxv, No. 4), reports some experiments with the dried sputum of three pneumonic patients. The sputum was taken on the fourth or fifth

day of the disease, spread upon linen, and allowed to dry in diffused light at normal temperature.

The first sputum lost its virulence after thirty-six days, while cultures could be made up to sixty days. In the second both the vitality and virulence were unimpaired after seventy days. In the third case the virulence lasted sixty-five days and the vitality over eighty-three days. This shows that the diplococcus lanceolatus retains its virulence in dried sputum more than seventy days, and its vitality much longer.

The author calls attention to the fact that the thin and frothy sputum dried in scales, which were easily picked up by a slight draught of air, thus scattering the germs. This indicates that the sputum of pneumonic patients, both in hospitals and private residences, should be thoroughly disinfected.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

A New Explanation of the Origin of Choked Disk.

J. Deyl (*Wiener Klinische Rundschau*, April 13, 1899) after much investigation states that choked disk is the result of compression of the vena centralis retinæ at its emerging point, or before, by the outer sheath of the optic nerve, which is forced apart from the nerve fibers in the pial sheath by pressure from hydrops intervaginalis or an extravasation of blood. The dural sheath thus expanded into an ampulla, bends and compresses the vena centralis until the circulation is partially arrested. The accumulation of fluid in the anterior portion of the space between the sheaths is caused by increased intracranial pressure, or by some occlusion of the optic foramen. This occlusion may also occur with a tumor of the hypophysis or in acromegalia in certain anatomic conditions, in which case the choking of the nerve-head is due to stagnation of lymph and consequent compression of the vein. As long as the ampulla-shaped dilatation of the dural sheath does not reach to the emerging point of the vein, "choked disk" does not occur, even with pronounced hydrops. And after the dilatation has subsided, from recession of the fluid after trephining or healing of the intracranial affection, the expanded sheath collapses, the pressure is removed, the circulation reestablished in the vein, and the choked disk condition is ended, but is liable to recur with a renewal of the circumstances. Tuberculous, syphilitic, and

other lesions may also compress the vein at its emergence and cause the choking. The vein is not compressed in its farther course, but rather dilated, which refutes the theory of primary edema. The writer calls attention to the new sign, the impossibility to artificially control the pulsation of the papillary arteries, which in many cases will differentiate a cerebral tumor from a renal affection as the cause of choked disk.

Malarial Disease Mistaken for an Affection of the Ear.

D. B. St. John Roosa (*Yale Medical Journal*, April, 1899) reports the autohistory of one of his patients, a physician, in whom the malarial disorder was mistaken by the attending physician for acute aural disease, and calls attention to this possible error in diagnosis. "It is not difficult," he states, "to distinguish a septic rise of temperature, with its irregular, vacillating curve, from that of pronounced intermittent fever, which rapidly reaches its height, and as rapidly descends."

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH., Attending Neurologist to Harper Hospital.

Cerebellar Tumor or Masturbation?

Richard C. Cabot (*Journal of the American Medical Association*, May 13, 1899) reports a case of a boy aged fifteen who had had attacks of retraction of the head with some arching of the back, accompanied by headaches, increasing mental dulness, etc. He remained a week in the Massachusetts General Hospital, and the chief symptoms observed were the headaches, unexpected vomiting, staggering gait, occasional involuntary passage of urine, retraction of the head, exaggerated reflexes, etc., the observations leading to a provisional diagnosis of cerebellar tumor, probably solitary tubercle. Nearly five years later he walked into the Doctor's office the picture of health, when he incidentally remarked: "One thing I ought to have told you folks down to the hospital, but I didn't. I used to abuse myself a lot. After I went out of the hospital I left it off, and just as soon as I did I began to get better. Now I am all right, except I still stagger in the dark and my eyes are not first-rate." March 24, 1899, he reported as perfectly well and hard at work.

The query is raised as to whether all the symptoms could possibly have been due to masturbation, or whether a solitary tubercle could have been absorbed or encapsulated.

Congenital Atrophy of Cerebellum.

In the *Journal of the American Medical Association* of May 13, 1899, Dr. C. G. Hubbard reports a case of an infant perfect at birth in every respect, "except that from the lower part of the occipital bone there hung a sac three inches long, two and one-half inches wide, and one-half inch thick at the base, filled with cerebrospinal fluid and communicating with the cranial cavity through a nearly circular opening in the bone about one inch in diameter." Repeated tappings were resorted to in vain, and were finally abandoned after the seventh because of the irritation so occasioned. A hydrocephalic condition then developed, and the child died at four months and fourteen days. A partial autopsy revealed so extensive an atrophy of the cerebellum that the right hemisphere was scarcely half an inch in diameter and the left only a trifle larger.

Dr. Hubbard calls attention to the fact that the child lived for over four months with only a remnant of cerebellum, yet there was no sign of "paralysis, spasm, convulsions, loss of function or organic activity in any part of the body."

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Nasal Insufficiency and Obstruction.

Lermoyez and Boulay, of Paris (*Internationales Centralblatt f. Laryngologie*, vol. xiv, No. 10), in discussing this subject, lay stress on the fact that nasal obstruction leads to unnatural unphysiological mouth-breathing. Inspiration and expiration may be both similarly impaired; occasionally there is more serious interference with expiration (pediculated swellings in the choana acting as valves). The results of nasal obstruction are very numerous:

1. Increase of the nasal secretion, which may become decomposed and fetid.

2. Impairment of sense of smell, occasionally complete anosmia.

3. Phonation disturbances (nasal quality of voice; labial, lingual, and palatine dyslalia).

4. Disturbance of deglutition, especially in nursing infants.

5. Impairment of hearing on account of defective ventilation of the Eustachian tubes.

6. Visual disturbances (limitation of the visual field, asthenopia, scotoma, iritis), due to disturbances of the circulation in the orbital vessels.

7. Nervous disturbances: (*a*) insomnia, (*b*) neurasthenia, (*c*) headache, (*a*) aprosexia.

8. Abnormal development of the bones: (*a*) in the face (atrophy of superior maxilla, deviation of the septum); (*b*) in the thorax (pigeon breast); (*c*) in the spinal column (scoliosis).

The Occurrence of Diphtheritic or Pseudodiphtheritic Bacilli in Ordinary Coryzas in Children.

Stooss, of Bern (*Internationales Centralblatt f. Laryngologie*, etc., vol. xv, No. 4), having under treatment an eight-year-old boy suffering from clinical diphtheria, observed that an infant one year old in the same family had a coryza, and made a bacteriological examination of the nasal secretion in the latter case. In both cases strongly virulent bacilli were found, and both recovered promptly under serum injections.

This experience led the author to make bacteriological examinations of a large number of acute coryza cases, and regularly he found in dry cover-glass preparations bacilli which resembled short and medium length diphtheria bacilli and reacted similarly to staining media. According to the culture medium there appeared in forty-five cases in varying numbers the short, medium, and long (glycerin agar) bacilli, but generally the short form. The virulence was complete in two cases, weak in two cases, and in the other forty-one cases almost or entirely *nil*. Of the latter cases thirty-one suffered from various acute general infections, bronchitis, pneumonia, measles, and gastric catarrh.

The short virulent form of bacilli could not be distinguished either morphologically or chronologically from the pseudodiphtheritic bacilli. Diplococci were invariably present; in severe cases the staphylococcus aureus and diplo-streptococcus abounded. One group of children showed only a temporary nasal secretion with non-virulent short bacilli, without systemic disturbance.

The author concludes that in the catarrhal rhinitis of children two sorts of diphtheria bacilli occur: (1) In the great majority of cases a pseudodiphtheritic bacillus very like the Loeffler, but not absolutely identical; (2) short Loeffler bacilli, generally of diminished virulence.

Since the nose may harbor virulent bacilli without their forming a membrane, the diagnosis of nasal diphtheria must depend upon a bacteriological test for virulence.

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ORIGINAL CONTRIBUTIONS.

ETIOLOGY OF RHEUMATIC FEVER.

BY T. WERTZ, M.D., EVANSVILLE, IND.

Rheumatic fever may be defined as a specific febrile disease, characterized by multiple arthrosis and a tendency to affect the heart and other serous surfaces. This definition applies only to the disease commonly called acute and subacute rheumatism. It is a disease widely distributed throughout the earth, but perhaps with greater prevalence in the temperate zones. It is also more an urban than a rural disease.

The period of human existence most susceptible to the rheumatic influence is that of early adult life, between fifteen and thirty-five years of age. It is, perhaps, more prevalent below the age of fifteen than is generally supposed, because the characteristic arthritic symptoms in childhood are frequently only slightly manifested or absent altogether.

In early life females seem to suffer most, but in adults the males predominate, though the difference in each sex is small.

Heredity, as a causative factor, has been rated by Fuller as high as thirty-five per cent of all cases. Pye Smith has set the figures somewhat lower, at twenty-three per cent. It is altogether probable that the hereditary influence has been exaggerated, owing to the common belief that the disease is a constitutional one and closely related to gout. Charcot, in his writings, has strengthened this belief by assuming in certain individuals the existence of an arthritic diathesis. Hutchinson has taken up this idea and constructed upon it the arthritic tree with two branches — one, under dietetic influences, leading to gout; the other, from exposure to cold, leading to rheumatism. So far no one has been able to formulate a clear expression of

this arthritic diathesis. That a personal equation does exist, in certain individuals, that favors the development of rheumatic fever, is altogether probable, however difficult it may be of a satisfactory explanation.

Climate probably has a determining influence on the origin of rheumatic fever, though in a far less degree than some other of the infectious diseases, as, for instance, yellow fever.

The wide distribution of rheumatic fever throughout the earth is presumptive evidence that climate exerts but little influence in the spread of this disease.

Season has always been reckoned as a prominent causative factor in the development of rheumatic fever. In Norway, where the notification of rheumatic fever is compulsory, the records, which cover a period of thirty-nine years, show that the minimum number of cases for the whole period occurred in the month of August. The decline to this period is gradual, and from the month of August to the end of the year there is a rapid rise, reaching the maximum in the month of January. For the whole of Scandinavia a similar prevalence is recorded, except that the curves of frequency may be broken, either in the spring months, March or April, or the November curves may be higher than for December. In Berlin the hospital records show a prevalence corresponding closely to that given above. But for Munich and throughout Bavaria the greatest number of recorded cases corresponds to the month of April, and the same is true for Philadelphia. Bisnier, for Paris, accords the greatest prevalence of the disease for the summer and spring months. Dr. Gabbet tabulates two thousand cases of acute and subacute rheumatism admitted to the London Hospital during a period of nine years, from 1873 to 1881 inclusive. Of this number 20.9 per cent were admitted in the first quarter of the year, 20.6 in the second quarter, 25 in the third quarter, and 38.2 in the last quarter. The least number of admissions for the whole period occurred five times in the first quarter, the number of admissions greater in the second than the first quarter five times, the third larger than the first five times, and the fourth largest all the time, with but a single exception. From the above short summary of the records for different places, the greatest prevalence seems to correspond to the first half of the year; but taking the record of a single hospital, as set forth in Dr. Gabbet's tables, there is a decided prevalence in favor of the latter half of the year. Such seasonal irregularities, no doubt, would appear oftener if the notification were compulsory and the records were searched for long periods of time.

Throughout the literature of rheumatic fever, cold and wet have always been the twin factors of greatest import in the causation.

Outdoor laborers, such as coachmen, sailors, and washerwomen, who are much exposed to inclement weather, are supposed to be the most prone to the disease. It has been held by those who follow the teaching of Prout, Todd, and Latham, that through the agency of cold and wet in chilling the surface of the body the metabolism of the muscles is disturbed, resulting in the overproduction or retention in the body of lactic and uric acids. It is needless to say that a demonstration of an excess of these acids in the tissues and fluids of the body in this disease is wanting. On the other hand, those who hold to the nervous origin of rheumatic fever have attributed to the chilling effects of cold the production of an irritable state of the cerebrospinal nerve centers, resulting in the phenomena of rheumatic fever. How much influence in the causation is due to cold and wet, and how much to fatigue, is not clear, but that both exert an influence has been demonstrated. Pasteur has shown that the common domestic fowl is immune to anthrax inoculations, but by artificial refrigeration it becomes susceptible. Charrin and Roger have shown the influence of fatigue in the production of disease. These experimenters inoculated eleven rats with pure cultures of anthrax bacilli, five of which were left at rest in their cage, and these remained unaffected; the remaining six were placed upon a small treadmill, and at the end of twenty and thirty hours they were all dead. By the action of damp, cold, and fatigue, the activity of the tissue cell is lowered either by the accumulation of excrementitious substances in the body or the attrition of the cellular elements predisposing to noxious influences from without.

The influence of temperature on the prevalence of rheumatic fever is clearly set forth in Dr. Newsholm's Milroy lectures. He says: "Taking the mean temperature at Greenwich since 1866, we find that in 1866 and in 1868–9, years in which rheumatic fever was excessive in London, the mean temperature was from one to five per cent above the mean for the whole period 1866 to 1893; in 1874–5, which were epidemic years, it was at the mean line. In 1879, a minimum year for rheumatic fever, the mean temperature was six per cent below the mean; and in 1884, with a temperature four per cent above the mean, rheumatic fever was again excessive. In 1893 there was the same association of high temperature and excessive rheumatic fever. In the period in which it is possible in London, great epidemics of rheumatic fever occur only when the mean temperature of soil is exceptionally high—*i.e.*, over fifty per cent—and the greatest epidemics occur when the mean temperature has been thus high for two or more years in succession."

This statement accords well with Fuller's observation that the disease occurs less often in the frosty month of December than in the warmer but relaxing month of May.

There is still another factor pertaining to weather that exerts a controlling influence on the prevalence of rheumatic fever. There seems to be a direct connection between the frequency of this disease and drought. In the years 1868–70–74, in England, the average rainfall was small, and those were years of great prevalence of rheumatic fever; in the years 1873–77–83 the rainfall was excessive, and the number of rheumatic cases was small. In Brighton, the rainfall in 1873–4 was much below the average, and in 1875 it was one per cent above the average. In 1874–5 occurred a large epidemic of rheumatic fever. From 1877 to 1881 the rainfall was above the average, and rheumatic fever below the average in three out of four years. In 1884 there was again a deficient rainfall and little rheumatic fever. In 1888 there was a large amount of rheumatic fever, and the level of the ground water was low. In 1891, with very little rainfall, there was excessive rheumatic fever. In the year 1888 the rainfall was above the average, though the subsoil water was below the average, in spite of an average rainfall, owing to the severe drought of the preceding year. On account of peculiarities in the geological formation of the soil, the ground water levels vary in different localities, with an equal quantity of rainfall.

It is shown by the records of water levels, in wells kept at different places in England, that the years of high levels were 1873–77–83, and the number of rheumatic fever cases recorded in these years was small; and in the years 1875–87–88–90–91–92 the water levels were low, with great prevalence of rheumatic fever.

The seeming close connection here traceable between the annual rainfall and high or low soil temperature is of exceeding interest in regard to the bearing it has on the prevalence of rheumatic fever in particular, and presumably on disease in general. I am not familiar with any similar observations on soil temperatures and subsoil water levels in our own country. The importance of the subject is at once apparent. In connection with the daily signal service observations on storm areas, rainfall, and temperature, it would be an easy and important matter if our local health boards throughout the State of Indiana would supplement these reports with accurate daily observations on soil temperature and subsoil water levels taken from ordinary wells, or wells constructed for the purpose. With such a record before us and a compulsory notification of all specific febrile diseases, it would be easy to show the connection, if any, between the absence of rain or an excessive rainfall, high and low temperature, and the absence or prevalence of specific febrile diseases throughout the State.

It seems that certain houses acquire a certain predilection for

rheumatic fever. Edlefsen reports two cases in the same house twenty-one times in the same year, and seven times in one house in one month. Prinzing observes that the most cases of rheumatic fever occur in the old parts of towns, and that certain houses and rooms are especially infectious. In Oyonnax, a town of five hundred houses, Frusinger reports half of all cases of rheumatic fever occurring in a number of years confined to ten houses in one small street. Friedländer reports 357 cases, seven of which occurred in one house, eight in two houses, five in another, eight houses with four cases each, ten houses with three, and eight with two. Persons occupying the basements of old houses acquire a greater susceptibility to the rheumatic influence than those living in newer houses. The poison of rheumatic fever, whatever it may be, seems to cling to certain houses like that of diphtheria, erysipelas, and scarlet fever.

As yet, bacteriological research has added little to our knowledge of the origin of rheumatic fever. Pathological specimens from acute cases are seldom available for microscopic examination. Investigations have been mainly carried on from an examination of the blood, synovia, and fluid from the pericardium of rheumatic fever patients. The microscopical examination of the synovia has given varying results. The streptococci albus and citreus have been found in the fluids of the joints in both the acute and chronic forms of the disease. Staphylococci of feeble virulence have been injected into the veins, with the result of inducing joint effusions and without suppuration. From time to time various investigators have isolated bacteria, principally of the coccus group, from the joints and other lesions of rheumatic patients which were supposed to be of pathological significance, but after a time we hear nothing about them. This is not to be wondered at, for in those joint affections known to be of specific origin, as in blennorrhea, microorganisms are usually absent from the blood and joint effusions. The symptoms of anthrax arise long before the bacilli reach the blood-current, and what is true of anthrax is probably true of rheumatic fever. It is probable that in time the specific cause of this disease will also be discovered.

There are some points in the clinical history of rheumatic fever by which it may be compared to the specific febrile diseases. It is most prevalent in the winter months, like pneumonia. It has a prolonged febrile stage. In a certain proportion of cases there is a prodromal stage lasting from a few hours to several days. The onset is marked by chilly sensations and a feeling of soreness characteristic of the invasion of the body by microorganisms. Sore throat and bronchitis are frequently associated conditions, as in many of the infectious diseases. Hyperpyrexia is common to rheumatic fever,

scarlet and enteric fevers. It is marked by years of great prevalence, rising to the distinction of an epidemic like diphtheria. The liability to relapse is also a feature in common with many of the infectious diseases. The tendency to affect the heart is a condition always associated with infectious processes, with the possible exception of chorea. The joint affection and the endocarditis not infrequently coincide in point of time, indicative of a general infectious process. It attacks by preference a joint or member that has been injured, however trivial the injury may be, and in this respect it resembles erysipelas. A single attack does not confer immunity like smallpox, but rather, like erysipelas, predisposes to subsequent attacks.

With this brief and incomplete narration of the chief factors concerned in the etiology of rheumatic fever, I think it is entitled to a place among the specific febrile diseases.

AN OBSCURE CASE OF ABDOMINAL PAIN COMPLICATED WITH MORPHINE-EATING.

BY THE LATE WILLIAM PEPPER, M.D., PHILADELPHIA.

In the search for the truth in uncertain and obscure cases, I think far too little importance is placed on the "facies" of a patient by the rank and file of physicians. The face if rightly read may be an open answer to many an otherwise unsolved problem. We can learn much from a man's expression if we will but look. For example, here is a man whose face at once attracts and interests me, which will prove a clue, I think, to the solution of his hitherto unexplained case.

We are told that he has been unable to work for nine years, and for the major part of that time has been in bed, owing to an illness which has lasted during that period of time. But his complaisant, contemplative, half-contemptuous look is not that of a man worn out by chronic disease. In the first place, there are not many chronic troubles which last ten years; and when they do they make their marks as they go along; the patient is slowly broken down; piece by piece his strength, his courage, and those properties which go to make up what we call "self," are slowly sapped. This man's face does not present such a story; it is rather the face of a man who has been accustomed to see his case baffle his doctors, without experiencing the depressing influences of an organic trouble. Then, again, he tells a different story from that which a chronic case would relate. Let us hear it.

At the outset, nine years ago, he began to experience paroxysmal attacks of pain in the upper zone of the abdomen. These pains grew

worse through the attacks, until they were somewhat relieved by spells of vomiting. Later the pain became more or less constant, with these occasional exacerbations. The matters vomited were very offensive, liquid, blackish in color, but as far as I can determine not known by microscopic examinations to be blood or bile. The pain, he says, ran across his body from the left just below the edge of his ribs, and was of such a sharply defined nature as to make him suspect that some animal was darting to and fro. His skin at the same time seemed to be hyperesthetic; with this, occasionally, he had periods when he suffered from retention of urine. From the account it would appear that the catheter did not carry off the water until the bladder walls were stimulated to action by outside irritation, such as punching or kneading.

The patient went into a hospital after being under treatment for two years outside without relief. Here, to quiet his intense paroxysmal pain, he was given morphine; this practice was kept up for eighteen months, until he was in the habit of taking five grains hypodermically in the twenty-four hours. Since dismissal he again experiences the pain, though less intensely, and has reduced his morphine-taking. As he lies here to-day he tells us he is here to do or die, that he is willing to undergo any operation or course of treatment, however rigorous, if he is only relieved. As we approach this case, let us first endeavor to analyze the course of his trouble. We seem to have three stages: first the developing disease, secondly morphine-eating, and thirdly a decrease in morphine-taking with a recurrence of the original pain, for he confesses to the occasional use of that drug, which after careful examination we find is taken pretty regularly during the day.

It has always been my experience that when morphine has been given for any length of time for the relief of pain, there occurs a mimicry of the disease on the gradual withdrawal of that drug — a simulating of the original aches and pains, which imitate the real complaint so cunningly that it is often difficult or impossible to decide their true source. We will remember this element when we reach the history of the trouble again. The fact complicates an originally obscure case.

It was not nephritic colic; here the pain is anterior, in the renal region along the course of the urethra, and the passage of a calculus is common. Vomiting is common, but the case is clearly not of this sort. Neither is it hepatic; true, it is abdominal, but there never has been jaundice or gall-stones found after careful search. This reduces it to gastralgia or enteralgia. The position of the pain and the other signs all point to the stomach as the original seat of the trouble.

This was true probably nine years ago, but what of the condition to-day? It will be necessary to eliminate the morphine element before we can study the case successfully or intelligently. Without demonstrable organic lesion, it is never safe to attempt to diagnose any case into which such a factor enters. Then we will study what is left; new symptoms will probably rise up which will furnish good data.

In conquering the morphine habit it is necessary for the physician and patient to work hand in hand; there must be forbearance and patience and sympathizing encouragement on the one side, and conscientious, earnest endeavor on the other. In such a condition of things it will be possible to overcome this dread trouble, but it can be done in no other way. Simultaneously with this will be established a tonic nutrient treatment, a regular diet, and good moral control. Electricity may be used to tone up the system. Some analgesic which is not an anodyne will be given, such as antipyrin. We will not attempt any lavage or nephrectomy, however, until we clear up the case sufficiently to make a diagnosis reasonably certain and not mere guesswork.

THE ESSENTIAL POINTS IN THE TREATMENT OF DIPHTHERIA.

BY JAMES G. BRUBAKER, M.D., PHILADELPHIA.

In well marked cases of diphtheria there is generally an agreement between the results of a bacteriological examination of the exudate and the clinical diagnosis. But it is well to remember that there are some cases which do present a contradiction. I have seen typical cases of this disease, in which there were two or more persons in the same house suffering from it, where there were diphtheritic palsies, albuminuria, etc., yet careful testing of scrapings from the throat failed to demonstrate the presence of the Klebs-Loeffler bacilli. In such cases, where the clinical diagnosis is plain, the physician should stand by it in spite of the bacteriological report. The examination should be made, but I hold that we knew diphtheria and treated it before bacteriology was known. Hence the sound practitioner cannot disregard his responsibility in a given case because men of more or less experience, working with material in which there is a possible chance of impurity, etc, do not find the specific cause of the disease.

There is another fact which is causing annoyance at the present time. When an individual has passed through an attack, he is apt to harbor the bacilli for a long time after convalescence—from a few weeks to several months even. Two years ago I knew an individual who was entirely convalescent from the disease, and who visited friends at some distance. This person conveyed the germs and set

up a house epidemic, one of the cases thus started having a diphtheritic paralysis. This fact is a source of annoyance where houses are "posted" by the authorities, as it takes a long time—months in some cases—to get the poster down, examinations continuing to show bacilli. At the same time cultures taken from those not in contact with the diseased persons also show the presence of the bacilli. The patients may be perfectly well and yet capable of starting epidemics, as in the case instanced. These things are stumbling-blocks to physicians, especially in cities where houses must be posted, and in the present state of our knowledge we do not know just what is best to do. Efforts should be made to reach definite data and knowledge as to what should be done for the best interests of the patient and for the safety of others in such cases.

About sixty per cent of the cases are found by bacteriological examination to be true diphtheria, in that the bacillus is present. In forty per cent the bacilli are absent. About eighty per cent of what is known as "membranous croup" is shown to be truly diphtheria by the finding of the bacilli. From this follows the working rule that every case of membranous inflammation of the throat should be treated as diphtheria.

As to the treatment of the disease, prophylaxis is of the utmost importance. The area of contagion is a limited one, and isolation and disinfection can accomplish much. Milder cases and convalescents may be the most dangerous, and bacteriological examinations should be carefully made. Disinfecting gargles and mouth-washes should be used, and those exposed to the contagion should be immunized by antitoxic serum. Alcohol in different forms should be given the patient with a free hand.

In regard to the local treatment, the early destruction and removal of the exudate in my experience is not important, and the exudate had better be let alone; for often the newly-formed membrane spreads more rapidly than the old if it is removed, hence caustic and instrumental interference should be avoided. Soothing and disinfecting applications may be made, but it should be remembered that it is impossible to disinfect the deeper part of the membrane, where systemic infection is taking place. Steam inhalations should be employed where there is implication of the larynx, and warm baths with cold douches to the head and breast often do good. As to the application used, I have narrowed down to Loeffler's solution; a great many others are used and recommended, but I prefer the one named.

The giving of serum need not interfere with other internal treatment by drugs, and of these I am partial to the tincture of the chloride

of iron given in medium doses for its action on mucous membrane and as an astringent. Preparations of mercury should also be given. I would advise a laxative at first, followed by full catharsis, and afterward smaller doses continued. Diphtheritic patients are very tolerant of mercury, and ptyalism is not easily produced. To combat the depressing influence of the disease, alcohol should be given as mentioned, and a liberal quantity of easily digested, nourishing food.

Antitoxin blood-serum therapy should be used in all cases. There is no reaction to its use, but little pain is produced, and immunity appears at once, though this is short. The technique is simple, any hypodermic syringe holding from ten to twelve cubic centimeters answering. The instrument and the site for injection being sterilized, the serum should be slowly thrown into the subcutaneous tissues. The site may be between the shoulder-blades or outer part of thigh. I prefer the former place, as it is much better, especially in the case of children, to make the injection where the manipulations will not be in sight of the patient. After the injection the puncture should be sealed with collodion, with or without iodoform, as preferred, the sealing being more to prevent the escape of fluid than for any other purpose. There should be no local reaction; but if such a result follows the injection, it is because the technique was not good, or else the serum used was not absolutely pure. The immunizing dose for children is placed at two hundred units, but this may be increased to five hundred or even one thousand, as there is no danger in the serum itself. The curative dose should be at least one thousand units, and this repeated in from twenty-four to forty-eight hours. In severe cases I have given fifteen hundred and even two thousand units, and repeated the dose in twenty-four hours. The earlier the serum is given, the better the result will be. If the case is not seen early, repeat the dose in twelve to twenty-four hours. Three or four injections may be needed in severe cases not seen early during the attack. In favorable cases progress of the disease is arrested in twenty-four hours. Nephritis is less common in the cases treated early. Albuminuria occurs in cases treated by serum, but it is also found in other cases. The serum does not have an unfavorable action on the heart, and is especially of use in cases of laryngeal diphtheria.

In connection with this subject it should be said that it is of the utmost importance that the serum used should be obtained from a reliable laboratory. In general this is from those who furnish the largest amount of the material, and who have large business interests at stake, and who in addition have a scientific conscience. The physician is practically helpless in this respect, as he can use the material only as he obtains it, and has no way of testing its value

except by employing it. Careful judgment, therefore, is needed in the selection of a laboratory, and even then the problem is a difficult one. This fact is made one of the strongest objections by those who oppose this method of treatment, some maintaining that one reason why it is so strongly advocated by certain physicians is that they have large commercial interests in its manufacture. This is a narrow and most unfortunate view, as the men who have made the most thorough investigation of its merits are above the least breath of suspicion. Then there are other physicians who oppose the treatment simply because they never see any good in anything except the traditional methods of their fathers.

Personally I have seen good results in scores of cases. In some the treatment fails because they are too grave from the beginning, or were treated too late in the course of the disease, or from other reasons not apparent. Notwithstanding these failures, and having seen prompt and remarkable effects from the use of serum, I do not hesitate to say that any physician who sees a case of diphtheria, or even a suspected case, fails in his duty if he does not use the serum treatment.

I wish to emphasize the importance of using this treatment *early*, like other specifics are to be used. In nearly all cases mixed infection follows after a time, and the specific medication fails to a great degree after such infection takes place. No doubt a large number of the cases lost are due to the fact that the serum was not used when it could combat alone what it has power over. We cannot expect the same reaction and curative effect in the presence of other organisms. Hence the serum should be given at once in a suspected case, even before it can be decided positively. Do not wait for the bacteriological report, but begin the treatment.

The surgical aspect of the disease is touched upon when we speak of intubation and tracheotomy. As with the antitoxin, operative procedure must be carried out early in some cases in order to save life. I speak of two points in connection with this subject: First, when intubation has been decided upon it is good practice to prepare at the same time for immediate tracheotomy, if there should be any failure in the inserting of the tube, as blocking of the larynx by exudation, etc. This not often happens, but lives have been lost in this way. Second, a point of great importance to remember is that the exudate in laryngeal diphtheria or other forms simulating it is not confined to the larynx itself, but extends into the bronchi. This may take the form of casts in the larger tubes or of plugs in the smaller ones. Hence mechanical obstruction to the entrance of air may occur at the larynx, or at the smaller tubes, or at times in both. Owing to

the small amount of tidal air and the asthenia of the patient, physical signs may be masked, so that it is impossible to tell whether the bronchitis be present or not. Hence it is the duty of the physician when intubation or tracheotomy has been decided upon to state to the parents or friends that even the operation may not afford relief, because of a possible obstruction which cannot be reached. Nothing could exceed the disappointment of the operator or the violence to the confidence of the people in his ability if the operation were done and the patient die a few hours after from the cause named.

DO WE OBEY THE CODE OF ETHICS?*

BY R. G. ECCLES, M.D., BROOKLYN, N. Y.

Laws of ethics are as firmly fixed in the nature of things as astronomical or chemical laws; they are in no sense a mere empiric order of things without adequate reason. Such things are subject to change as new conditions arise, as is shown in the difference which has come to pass in the matter of how interest on money has become respectable. Bad ethics inhere not in any given act, but in the spirit and social conditions existent when the act was committed. Yet it should be held that no one is to let go of any ethical formula or code until it has been proved that it is leading to social results that are unquestionably bad, and that its readjustment would lead to results as decidedly good.

For years there has been a great outcry against the code of ethics of the American Medical Association by a large number of influential physicians on the ground that it did not give them sufficient freedom in certain lines of conduct that they wished to pursue. The code does not disagree with the highest demands of morality, it simply interferes with certain commercial advantages which a change might bring to them. To violate the code in the matter of advertising and consultation with quacks would be a bad thing not only for medical science but for civilization as well. It is hard to suggest any serious improvement in the leading features of the code, but some minor details might be improved. To specify one particular instance, it is believed that a single word vitiates the otherwise excellent section of the 1847 code relating to patents and nostrums. The section recognizes the menace to medical science in the exploitation of secret medicines. Physicians who prescribe them are polluting the life stream of medicine, and decent practitioners should keep aloof from all such. Secrecy and

*Abstract of a paper read before the American Medical Association at Columbus, Ohio.

science are forever sworn enemies. Every prescription calling for a secret remedy is evidence of treason and a confession of ignorance. It is a most mild statement to say that it is reprehensible in a physician to certify to the efficacy of secret medicines. At the time of the formulation of the code in 1847 patent medicines were mere mixtures of drugs for which false and misleading claims as to therapeutic worth were put forth; they differed from non-patented secret nostrums only in the filing of a pretended formula. The makers of nostrums now fear the searching examinations of the Patent Office, which did not exist in 1847, and no longer seek to exploit the quasi-indorsement of the government; such therapeutic monstrosities as the old patent medicines have practically ceased to exist, and the secret nostrum has taken their place with the better protection of a copyright.

Now there are two classes of such nostrums—those sold direct to the public and those sold only on doctors' prescriptions, which latter with shameless effrontery has dared to call itself ethical. This is an insult to the profession, in that it charges that physicians are venal and mercenary, and to attempt to bribe doctors into prescribing such goods on the ground that they are not advertised in the lay press is adding new insult and crime. A drug's ethicality depends not on where or how it is advertised, but by its secrecy or the false pretences claimed for its therapeutic worth it becomes unethical.

Formerly a cloak for fraud, the Patent Office has now become the friend of science and the foe of secrecy. Medicines made by patented processes are constantly prescribed by every member of the Association, such as chloroform, salicylic and benzoic acids, and salts of sodium. Patent medicines of this kind are strictly ethical. If the code were strictly interpreted, it would make it irregular and impossible to use these remedies. Such interpretation would bar out all the synthetic chemicals which were not dreamed of in 1847.

The code prohibits physicians from holding patents on surgical instruments or medicines, but it nowhere declares patents *per se* to be unethical. A medical man who takes out a patent on a medicine or instrument is in a wholly different position from the layman who does the same. He should give up the profession, so as not to deceive his brethren into robbing themselves of time and effort to help him in his personal ends. It is in no sense unethical to own a patent, but it is unethical to deceive and misrepresent the motives in such ownership. That is what the patent-holding practitioner can scarcely, if at all, avoid doing.

The test of the ethicality of any measure is its accord with social good. Is the granting of patents a benefit to society, or an injury? Every patent by virtue of its patency is not a secret; its character is

fully known; it becomes public property in a few years. Does it pay society to grant patents? Surely no one will deny that the Patent Office is the greatest stimulant of discovery and invention in the world. In the patenting of a synthetic remedy we compel workers to divulge the secret of how they prepare that remedy, and we encourage others to devote time, brains, and money toward the discovery of other remedies. Shall we become moral pirates and rob them of all these? Shall we put up barriers to forbid the production of such good things? Shall we in other words become, in the name of ethics, encouragers of secrecy, enemies of medical science, robbers of the labors of others, and filchers of their invested accumulations? These men never would devote their time, talent, and capital to such work if they did not hope to get it back with interest. Stop the taking out of medical patents on goods of this kind and you will stop medical progress. A little work will go on just the same, but the discoveries will not be divulged. The world will be the poorer, and the victory will be against and not in favor of ethics. Not one of us would do what in the name of spurious ethics we ask ourselves to do. But, some one says, these remedies are getting so numerous we do not know what to do with them. Have you never heard of the fundamental law that governs evolution? Do you not know that in the struggle for existence the fittest survive? Did it never occur to you that this embarrassment of riches is a blessing? If you as medical men leave the struggle entirely in the hands of commercial interests, there is nothing more certain than that the house which spends the most money advertising its wares will beat those with the best goods. It is our duty as medical men, and particularly as members of the therapeutic section of the American Medical Association, to direct this struggle by taking part in it. If instead of holding aloof from the fight and saying "Let the best man win," we should undertake to sift the mass and commend in our loudest tones the best, such a course would end in making therapeutic worth and not pretty advertisements the selecting power of fitness.

A CURIOUS example, in a young female, of reading through opaque bodies has just been reported by Grasset, of Montpelier. Dr. Ferraul, of Melbourne, had told Grasset of this girl. Grasset, to test her, wrote some French, with a few Greek and other words, on a card, wrapped it in tinfoil, enclosed this in an envelope, which he sealed with wax. Ferraul went to the girl's house to bring her, but she at once said: "I can read it now" (300 yards away), and immediately dictated to Ferraul the writing on the card. Grasset was informed of the test and reported it to the local society. Who can explain it?

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EDITORIAL ARTICLES.

THE MOSQUITO AND YELLOW FEVER.

Evidence seems to be accumulating that suctorial insects are not only instrumental in disseminating malarial disease, but that other fevers may owe their origin to similar sources of inoculation. The ordinary mosquito, *Culex pipiens*, seems to be above suspicion as far as grave danger to mankind is concerned. The particular class known as *Anopheles* will probably be found to be alone concerned in the transmission of the malarial parasite. The hygienic problem becomes in consequence much simplified, and it may be reasonably hoped that in attacking the stagnant waters in which the malarial host breeds, the disease it engenders may eventually be stamped out.

The bacteriological problem of yellow fever is as yet a three-sided one, and the parts played by the different micrococci have not been completely worked out. The discovery by Finlay, of Havana, however, in a culture made with the heads of contaminated mosquitoes, of the identical micrococcus in tetrads (*M. tetragenus febris flavæ*, *M. tetragenus versatilis*, Sternberg, and *tetracoccus versatilis*), previously found by him in the secretions of yellow fever patients, not only goes far to dispose of the dispute between Sternberg and Sanarelli as to the identity of these microbes, but also strengthens the opinion that yellow fever is one of the diseases in which suctorial insects may play an important part.

The time has arrived when America must enter fully into scientific inquiry regarding the nature of tropical maladies. The white man's burden is of necessity a tragical one, and the death record from unavoidable disease will be one of the saddest historical incidents of our recent war as well as one of the gravest drawbacks in the occupation of new territory. If the mosquito is a contributory factor of importance in the production of this direful malady, yellow fever, so aptly

called "the plague," why should not vengeance for all the wrongs that it has brought to humanity be heaped upon it? The destruction of the mosquito larvæ in swamps, pools, privies, and stagnant waters should be unremittingly pursued, and every means should be taken to prevent these insects reaching yellow fever patients and so imbibing the infecting blood. The problem is certainly not beyond solution by practical effort, and it must immediately take its place among the urgent questions of the day.

EDITORIAL NOTES.

What is Good Meat.

Poisoning by alimentary substances is so frequent, and the grave symptoms following the ingestion of tainted foods is often so transitory, that their causes elude detection. Recently it has been proposed to make use of the clumping reactions made familiar by the Widal test to determine the bacillæmic qualities of meat, and it would seem that the method promises much. It may be wise at this season to recall a few of the characteristics of sound meat. Good wholesome meat is neither of a pale pinkish nor of a deep purple tint. It has a marbled appearance, from the ramification of little veins of intercellular fat; the fat of the internal organs especially is firm, hard, and suety, and is never wet, whereas that of diseased animals is often soft and watery. The feel of healthy meat is something elastic, and hardly moistens the finger. Diseased meat feels wet and watery. Good meat has but little odor, whereas diseased meat smells faint and cadaverous. Good meat bears cooking without much shrinking or losing much of its weight, but bad meat shrivels up and boils to pieces — this being due to the larger proportion of watery and gelatinous material, and the absence of true muscular substance. Under the microscope the fiber should be clear and well defined, and free from infusorial animalculæ; while that of diseased meat is sodden, as if it had been soaked in water, the transverse streaks are indistinct and wide apart, and animalculæ abound in it.

A Medical Law for Michigan.

By the terms of the Chandler bill, which by the signature of the Governor becomes a law, the State of Michigan will reap the advantages of a measure which is as satisfactory as that which is operative in any other State of the Union. The terms of this enactment include the following provisions:

1. The appointment of a medical board of registration composed of five regulars, two homeopaths, two eclectics, and one physiomedicist. The members of this board, which meets twice each year at Lansing, form the executive force of the law.

2. The reregistration of all physicians in the State who furnish proof to the board that they are legally registered under the act of 1883. This is expected to shut out the holders of bogus and fraudulent diplomas, and was bitterly fought by some so-called medical "colleges" for that reason.

3. The recognition of foreign certificates of registration or licenses issued where the requirements for registration are at least equal to those required here; but the country or State so recognized must extend a like privilege to holders of certificates from the Michigan board.

4. The recognition of diplomas from such legally incorporated and reputable colleges of medicine in the United States as shall be approved and designated by the board of registration.

5. The examination of all candidates for registration not provided for in the foregoing.

6. The reporting monthly to the board by the several county clerks in the State of the registration made, removals, deaths, etc.

7. The enforcement of the act by the board direct, not by local authority, as under the old act.

Virchow and the Missing Link.

In a paper read by Ernst Haeckel before the International Congress of Zoologists last year, the author discussed the discovery of Dubois, in Java, of the skullcap, femur, and two teeth in the upper tertiary deposits, contending that in these remains had been found the missing link. Many distinguished men of science have concurred in the opinion that whether these remains were human or pithicoid, they belong to a creature almost intermediate in its structure. Haeckel's attitude called forth uncompromising repudiation by the veteran Virchow. He maintained that the skull was that of an ape, while the thigh belonged to man. This was refuted by expert paleontologists, who declared that without the slightest doubt the bones belonged to the same individual. Virchow explained that certain exostoses on the thigh proved its human nature, whereupon Professor Marsh exhibited a number of thigh bones of wild monkeys which showed similar exostoses. Virchow then declared that the deep constriction behind the upper margin of the orbits proved that the skull was that of an ape, as such never occurred in man. A few weeks later Pro-

fessor Nehring, of Berlin, demonstrated the same constriction on a human prehistoric skull from Brazil. Altogether it would seem that Professor Virchow has been led by his antagonism to the derivative theory into a position which has not been signalized by the highest force of reason.

Release the Caged Prisoners.

Among unsuspected agencies for the dissemination of disease must now be enumerated canaries, parrots, and other feathered pets. It has been known for some time that avian tuberculosis is a common disease, and that infection can be carried to human beings who keep birds within the house. A writer in *The Lancet* has recently collected ten cases in which the transmission of tuberculosis appears to have been directly due to caged birds. There is generally a high mortality among caged birds, especially if they are kept together. There has been some dispute as to whether avian tuberculosis is identical with that which prevails in the human species, but it seems to be generally admitted that both forms of tuberculosis are produced by the same species of bacilli, although by different varieties, the differences between them having been produced by differences in their respective modes of nutrition. The fact that there are 400,000 canaries sold every year in Great Britain proves conclusively that in this way a large number of inevitable cases of tuberculosis are taken into the household.

An Uncomfortable Convention.

The last meeting of the American Medical Association at Columbus from the standpoints of scientific interest and attendance was all that could be desired. It is, however, to be hoped that the nominating committee will once and for all learn that a thoroughly successful meeting cannot be held in a small city. The lack of accommodations with the extremely hot weather combined to produce a vast amount of discomfort to the visiting delegates. People who had months before engaged rooms found themselves in dormitories with six beds. Many physicians during the first night of the convention walked the streets, being quite unable to find accommodations of any kind. Hundreds of delegates left the meeting at least two days earlier than they would have done had they been comfortably provided for. It cannot be insisted upon too strenuously that one of the fundamental requisites of a successful meeting is ample accommodation for the visiting delegates. Unless the claims of personal comfort be conciliated, a large amount of damnation is sure to fall upon something or somebody.

ITEMS AND NOTES.

FAMINE in Russia has assumed frightful proportions.

YELLOW FEVER has appeared in the South in two places.

AN Italian brig from Montevideo recently arrived at Hampton Roads with nine of the crew down with scurvy.

To keep alcohol absolute place in it a sheet of gelatin, which by its affinity for water maintains the strength.

EFFORTS are being made to found a social club of medical men in Paris, similar to one recently established in Berlin.

THE daughter of Claude Bernard has established and is maintaining, just outside of Paris, a hospital and home for cats.

PLANS have been drawn for an institute for the study of tropical hygiene and pathology in Berlin. Dr. Koch will be the director.

METHODISTS of Chicago and vicinity have raised $150,000 for the erection of the new Wesley Hospital, to cost $200,000. Ground for the new building will be broken next month.

DR. H. R. CARTER, of the United States Marine Hospital Service, who recently arrived in New Orleans from Havana, reports that the sanitary conditions of Cuba are better than ever before.

THE Russian health authorities are reported to be alarmed at the advance of the plague toward Europe. It appeared some time ago in Russian Turkestan, and is now said to be raging in Mecca.

THE military bands in France visit the military hospitals once or twice a week to play to the inmates, and it is now proposed to extend this practice to include the general hospitals in garrison towns.

A BOARD of officers will be convened at New York on Tuesday, June 27, 1899, for the purpose of examining candidates for admission to the grade of assistant surgeon in the United States Marine Hospital Service.

A CONTRIBUTION amounting to about $75,000 has been donated by Baron Heyl zu Herrnshein, a National Liberal member of the Reichstag, Berlin, toward furthering the movement for the erection of sanitariums for tuberculous patients.

THE number of students at the ten largest universities in the world is as follows: Paris, 12,047; Berlin, 10,306; Madrid, 6143; Vienna, 5710; Naples, 5103; Moscow, 4461; Budapest, 4407; Munich, 3997; Harvard, 3674; St. Petersburg, 3615.

THE Russian Public Health Society has appointed a committee, under the presidency of Dr. Limberg, for the organization of a regular system of dental inspection and treatment in schools, not only in St. Petersburg, but throughout the empire.

PROF. ROSWELL PARK makes the startling prophecy that if for the next ten years the present relative death-rates are maintained, in 1909 there will be more deaths in the State of New York from cancer than from consumption, smallpox, and typhoid fever combined.

IT may be consolation to those threatened with blindness to learn from George Harley, F.R.S., the distinguished London physician, who suffered from loss of sight for a considerable period, that "the blind man lives in an ideal world of his own infinitely more beautiful than the world which surrounds him."

DR. LOUIS BAZET, San Francisco, has been made, according to the *Journal of the American Medical Association*, by the King of Portugal, a Knight of the Ancient Military Order of Jesus Christ, a rare honor to be conferred on a foreigner, and made in acknowledgment of Dr. Bazet's kindness to the Portuguese residents of San Francisco.

THE plague is increasing in Hong Kong, the official reports for the first three weeks in May showing three hundred and thirteen new cases and two hundred and fifty-four deaths. In Egypt also the disease is spreading, more cases having been discovered in Alexandria, and several also in Ismailia and other towns in the vicinity.

THE London *Truth* says that Dr. Pagenstecher, of Wiesbaden, who has been consulted by Queen Victoria concerning her eyes, recommends a speedy operation for the removal of the cataract with which Her Majesty is afflicted, and even goes so far as to guarantee that the operation will be successful, and that after it the queen will entirely regain her sight.

DR. THOMAS OLIVER, of England, who has been investigating the cause of the "compressed-air disease," which so frequently affects workers in caissons, has come to the conclusion that it is due to the increased solution in the blood of the gases met with in compressed air, and the liberation of these gases after the person escapes from the compressed atmosphere.

In examining the throat of a woman who had applied for laryngologic treatment, according to *Archiv f. Laryngologie*, E. Berthold noticed that the vocal cords had the appearance found only in the male adult. Further investigations disclosed that the individual was a hermaphrodite, who eight years later returned for a certificate to allow the change of sex, having fallen in love with a woman.

According to the *Bulletin Général de Thérapeutique* the following is the average duration of human life in the various countries: Sweden and Norway, 50 years; England, 45 years and 3 months; Belgium, 44 years and 11 months; Switzerland, 44 years and 4 months; France, 43 years and 6 months; Austria, 39 years and 8 months; Prussia and Italy, 39 years; Bavaria, 36 years; Spain, 32 years and 4 months.

Nelson, the great English admiral, about the meridian of life, was subject to frequent fits of the gout, which disease, however, his biographer states, he totally overcame by abstaining for the space of nearly two years from animal food and wine, and all other fermented drink; confining his diet to vegetables, and commonly milk and water. Early in life, when he first went to sea, he left off the use of salt, believing it to be the sole cause of scurvy.

The following are some of the bequests of the late Mr. Andreas Syngros, of Athens: $250,000 to the Evanghelismos Hospital, $50,000 to the Elpis Hospital, $75,000 to the Dromokaition Lunatic Asylum, $125,000 to the Amelieiori Orphanage, $50,000 to the Kadji-Kosta Orphanage, $75,000 to the Children's Hospital. There is also to be erected upon an extensive estate at Oropos, valued at about $800,000, a marine sanitarium for scrofulous and convalescent children.

Berlin and its suburbs are the happy hunting ground of some 2233 doctors, being thirty-seven in excess of the number for 1897. In 1825 there were only 191. The proportion to the population has risen from one per 1153 inhabitants in 1825, one to 1191 in 1887, to one per 754 in 1898. The total number of medical practitioners in the German Empire is put at 25,757, but Prussia alone claims 15,951 of these. Berlin alone maintains more doctors than the whole of Bavaria.

The Paris daily press, according to an exchange, has been commenting with much glee on the discovery that a person who had been attending the courses at the Lariboisiere Hospital, following the visits of the prominent medical attendants, even assisting occasionally at operations, is not a diplomate physician at all, but an oil merchant. Owing to his connection with the Lariboisiere he had acquired quite a little practice outside, in eye and ear troubles and obstetrics, his "specialties."

At Arras, in France, a young man accidentally swallowed a five-franc piece. It lodged in his stomach, and all attempts to get rid of it being unavailing, the following operation was performed: A large incision was made in the abdomen, through which the stomach was carefully drawn by means of a wire. A small slit was then made, just sufficient to allow the coin to pass, and it was extracted without difficulty. The stomach was then sewn up and replaced, and the abdomen closed. The operation was completely successful, and the patient is now rapidly recovering.

For many years, owing to the rigid enforcement of vaccination, says the *Medical Record*, which is possible under a well-inspired paternal government, Germany has been singularly free from small-pox. Recently, however, there have been a few cases, some twenty in all, reported from Würzburg and Hanover, and the excitement they have caused might have been justified by an epidemic of the black plague. Most of the cases occurred among some recently arrived Russian laborers, who brought the disease with them. Very few Germans have suffered, and they only in mild form.

It is publicly stated that there has been an important secession from the ranks of the vegetarians, the entire Dominican Order in England having received permission from Rome to eat flesh four days a week, instead of perpetually abstaining, as heretofore. In cases of ill health or specially hard work, meat is to be allowed six days a week. This decision has been arrived at after the closest medical and official investigation of the effects of perpetual abstinence from meat in a variable climate like that of England, the result being that vegetarianism has been declared incompatible with physical strength and hard work.

The *British Medical Journal* states that in the *Archives Orientales de Médecine et de Chirurgie* for March, "Dr. Voronoff, of Cairo, quotes some passages, and reproduces illustrations from the Latin translation of Avicenna's Canon Medicinæ, published at Venice in 1562, which show that the forcible straightening of the spine in cases of Pott's disease, recently introduced as a new method by M. Calot, is as old as the tenth century, possibly older; for Avicenna, whose span of life is indicated by the dates A. D. 980–1036, does not claim the method as his invention. The procedure was adopted by the Arabian physicians. In angular curvatures, the operator, fixing the patient's body with his knee, pressed forcibly on the projecting part."

In a recent report to the Surgeon-General, Major Lippincott, chief surgeon at Manila, states, according to the *Medical Record*, that 256

wounded Filipinos, including four men, were received into the hospital during February and March. Of these forty-five, including a woman, died. These people received the best of care and treatment and seemed to appreciate the efforts made in their behalf. It is interesting to note the different results of treatment between our men and the Filipinos. In the latter suppuration of wounds is the rule, while we rarely see it in our cases. Many causes account for this, but the chief reason, of course, is infection before coming into our hands. Besides, they have an inordinate propensity to tear off dressings and finger their wounds when opportunity offers.

According to the *Medical Record*, a woman in New York was arrested last week and arraigned in one of the police courts on a charge of intoxication. The magistrate saw that she answered his questions incoherently and seemed to be on the verge of a collapse. Without having her examined by a doctor or having any other investigation made, he committed her to an institution for fallen women. When she arrived there the house surgeon saw "alcoholism" written on the court papers that accompanied her, and so entered the case on his books, also without making an investigation. Early the following morning the woman died, and an autopsy showed that the cause of death was pneumonia.

According to an exchange the prohibition of the sale, to enlisted men, of a highly intoxicating liquor which is found in the wine shops of Manila under a variety of names has been agitated there for some time back. General Otis has referred the subject to his provost-marshal general for suggestions looking to a practical course of action. It appears that the liquor in question is alcohol, which is extensively and cheaply made from the refuse of sugar houses. The strong spirit is diluted by the wine venders, colored and flavored to suit, and sold at the price which its name as borne on the label seems to warrant. An old Scotch whiskey bottle with a perfect label sells, when filled with the alcoholic mixture, at a higher price than a bottle which does not bear a label.

It would appear that archeological discovery has demonstrated that the ancient Egyptians, 3000 to 3500 B. C., were cannibals. Prof. W. Flinders Petrie, an Egyptologist and excavator of fame, has successfully brought to light this fact. In the recent unearthing there were found piles of ribs and flesh-scraped bones, showing where human teeth had gnawed them. Professor Petrie found these evidences while excavating a group of old Mastaba tombs of 3500 B. C., in a cemetery near the village of Deshashab, some sixty miles south of

Cairo. Professor Petrie, from extended investigation, concludes that the source of Egyptian cannibalism can be traced, and is probably due, to the Libyans, who invaded and occupied Upper Egypt about 3000 to 3200 B. C. They habitually cut off the head and mutilated other parts of the body, and ate the same before burial.

DR. FORSTER, director of the Ophthalmological Clinic at Breslau, has recently published, says the *Medical Record*, some instructive statistics regarding the causes, other than ophthalmia neonatorum, of blindness in children. According to these, injury to the eyesight, with consequent blindness, is mostly occasioned by carelessness, more than twenty per cent of these cases being caused by playing with sharp instruments, and twelve per cent by malicious injury, such as blows, stone-throwing, whipping, and unsuitable means of correction. Similar results are shown by the statistics of most other ophthalmological clinics. Boissoneau, of Paris, reports that of nine hundred and thirty-nine children who were blind in one or both eyes, more than three hundred and fifty were injured by shooting and by the explosion of percussion caps.

A UNIQUE curio of medical literature is the little *London Phonographic Record of Clinical Teaching and Medical Science*, edited by the Society of Medical Stenographers, of which Sir William Gowers is the leading light. Into a small, thin pamphlet of fifteen pages, about six inches by four, are compressed four to six original articles and case reports, several editorials, and a column or two of news items. It is printed in pure Pitman shorthand, and for compactness the contrast between it and the average medical journal is like that between a pound of sugar and a gramme of saccharine. Its neatness, lightness, and economy of print and space, says *The Lancet*, make us long for the day when nothing but shorthand as a means of literary expression will be taught in our schools, and all our literature can be reduced to this compact and beautiful form.

THE campaign for the elimination of the rinderpest from the cattle of South Africa is being prosecuted, says the *Philadelphia Medical Journal*, by the Department of Agriculture of Cape Colony, and so far considerable success has been attained. Of such proportions was this plague that it is stated that ninety-eight per cent of the cattle were infected, and that of this number thirty-five per cent perished. Three different systems of inoculation were tried by the inspectors—that of Dr. Koch, an improved method of Dr. Edington, and a process of Drs. Turner and Kolle. Using Dr. Edington's method in twenty-three districts, 393,777 head of cattle were inoculated, and the treat-

ment resulted in a mortality of 32,464, or about 8¼ per cent. The value of the cattle thus saved is given at over $10,000,000, and shows the economic aspect of maintaining well-equipped scientific bureaus in the Department of Agriculture.

ACCORDING to M. Holl Schooling (Cosmos) there is an old rule for finding the length of a man's life if the present age lies between twelve and eighty-six years. This is the rule: Subtract the present age from eighty-six and divide the remainder by 2; the result will give the number of years you have yet to live. This old rule was discovered by the mathematician De Moivre, who emigrated to England from France in 1865, and became a member of the Royal Society. The curves given by M. Schooling are interesting to examine. A first diagram shows the chance that every man has of living one year longer than his present age. At birth, this chance is 5 to 1; at five years, 119 to 1; at ten, 512 to 1; at fifteen, 347; at twenty, 207; at twenty-five, 156; at thirty, 120; at thirty-five, 97; at forty, 78; etc. M. Schooling affirms from his calculations that of 1000 individuals of sixty years, 599 will live to be seventy, 120 to be eighty years, and 17 to be ninety; while of 1000 nonagenarians, four will reach their hundredth year. We may add that for men of sixty-five the average expectation of life is 10⅓ years.

DANIEL TURNER, says the *Practitioner*, a highly respectable physician of the last century, said: "Cancer hath its name of the Greek *χαρχινος*, from likeness (say some) in its veins to the claws of the crab, in Latin cancer." We read of Prince Orsini, Duke of Bracciano, a great Roman noble of the sixteenth century, that one of his limbs was afflicted with a loathsome cancerous affection, named a "lupa," or a she-wolf, because it was necessary continually to supply it with abundant applications of raw flesh. Toads were applied to cancerous sores, from which they were supposed to suck the venom. Theophilus Bouet, a Genevan physician, author of the first collection of post-mortem records ("sepulchretum"), writing in 1682, says that "an unguent of green frogs is very good for canker. Also the broth of crayfish, boiled in asses' milk, drunk five days successively, and this course repeated seven times, composes the pain of a canker in the breast." Again, we are told that "the head of a puppy a month old, cut off and dried and powdered, mixed with honey and laid on an ulcerous canker, is said to kill it." The famous Lord Bolingbroke was killed, as Horace Walpole relates, "by a man who pretended to cure him of cancer in the face." The remedy used in this case was "Plunket's paste," which got its name from one Plunket, who was a cancer-curer in London in the early part of the last century.

WILLIAM M. TISDALE, in *Lippincott's*, says the taking of a first dose of Chinese medicine is an ordeal which can be better imagined than described. It is invariably a bitter decoction. If the patient prefers, the herbs are given him in square pasteboard boxes holding about a pint each, and he "cooks" them at home. A Chinese prescription contains from ten to sixteen varieties of herbs, flowers, nuts, gums, barks, and roots. More than 3000 species are classified and used as medicine, but of these only some 600 are in general use. Whether the patient takes the remedies at the sanitarium or at home, he is requested to present himself every day before the doctor for another pulse examination, so that every change in his condition may be noted and the prescription varied accordingly. The Chinese are clever chemists in the line of pharmaceutical preparations, and prepare many medicines for their own use in the form of pills and powders; but these are employed by the Chinese physicians in treating the ailments of white people only to a limited extent. The reason given is that the simple hot decoctions of the fresh root or plant are the best form, because the most readily assimilated into the system.

THE recent death list of men known in science, says the *Popular Science Monthly*, includes the names of Charles Naudin, an eminent French botanist, Dean of the Botanical Section of the Academy of Sciences, and author of a book on Hybrids in the Vegetable Kingdom, at Antibes, France, March 19, aged eighty-four years; Dr. G. W. Leitner, an eminent Orientalist and linguist, Lecturer on Oriental Language at King's College, London, Principal of Lahne College, and Registrar of Punjaub University, where he introduced the use of their own language and literature in teaching Indian students, founder of the Anglo-Indian Institute at Woking, England, and author of works on Education, The Races of Turkey, The Races and Languages of Dardistan, Græco-Buddhist Discoveries, and other Oriental subjects, at Bonn, March 24, in his sixty-ninth year; Dr. Angelo Knorr, Docent in the Veterinary School of Munich, February 22; Elizabeth Brown, astronomical observer and author of papers on solar phenomena, at Cirencester, England, March 6; Dr. Wilhelm von Muller, Professor General Chemistry in the Institute of Technology, Munich; Dr. Friedreich von Luhmann, mathematician, at Strauslund, Prussia; Dr. Charles Fortuun, mineralogist, in London; Alfred Feuilleaubois, author of researches on Fungi, at Fontainebleau, France; Dr. Heinrich Kiefert, a geographer and cartographer whose fame was world-wide, whose maps and atlases are everywhere recognized as authorities, at Berlin, April 21, aged seventy years; and Prof. Sophus Lie, of the University of Christiania, an eminent mathematician, February 18, in his fifty-seventh year.

NEW PUBLICATIONS.

A TEXT-BOOK OF ANATOMY.

The production of a new manual of anatomy such as this is an undertaking of obvious magnitude. This text-book is by American authors exclusively, and national pride may be justly aroused in the production of such an excellent work. There is an unusual number of original illustrations; colors have been abundantly employed, and particular care has been bestowed in making the illustrations of genuine assistance to the student. There can be little doubt that this work will at once become exceedingly popular with students, for taken as a whole it is an admirable contribution to the science of anatomy.

A Text-book of Anatomy. By American Authors. Edited by Frederic Henry Gerrish, M.D., Professor of Anatomy in the Medical School of Maine, Bowdoin College. Illustrated with 950 Engravings in Black and Colors. Philadelphia and New York: Lea Brothers & Co., 1899.

PRINCIPLES OF BACTERIOLOGY.

This work is already so well known that it scarcely calls for any extended notice. It is now in its fifth edition, and this shows that it must contain within itself the secret of its own success. The present edition is considerably enlarged, and it now forms a complete guide to the student of bacteriology in the laboratory. A number of old illustrations have been replaced by others in colors, and other alterations have been made which add to the value and popularity of the work.

The Principles of Bacteriology. A Practical Manual for Students and Physicians. By A. C. Abbott, M.D., etc. Fifth Edition, Enlarged and Thoroughly Revised. With 109 Illustrations, of which 26 are Colored. Philadelphia and New York: Lea Brothers & Co., 1899.

SEXUAL IMPOTENCE.

This is a translation of the second German edition of the author's work. The book will appeal in a novel way to many readers. When first issued it caused much commotion in the ranks of the "old fogies," and to-day many of its recommendations will prove unacceptable to those who believe in "superannuated gods" or antique doctrines of morality. The author devotes most of his attention to "impotentia coeundi" and its proper treatment. In addition to the subject-matter primarily commented upon, the author's remarks on a number of related topics make the work one of great interest.

The Pathology and Treatment of Sexual Impotence. By Victor G. Vecki, M.D. 8vo, cloth; pp. 291. Philadelphia: W. B. Saunders.

URINARY ANALYSIS AND DIAGNOSIS.

This book is not burdened with difficult chemical tests which are of little use to the busy practitioner, but is devoted almost entirely to the consideration of microscopical examinations and microscopical diagnosis. Enough is devoted to chemical analysis for ordinary office work, but the author rightly lays great stress upon the microscopical examinations, which too often are neglected or to which too little importance is attached.

The illustrations and explanations are both so clearly set forth that the work will be much appreciated by expert and tyro.

Urinary Analysis and Diagnosis by Microscopical and Chemical Examination. By Louis Heitzmann, M.D. New York: William Wood & Company, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

MEDICINE.

Influence of Sunlight on Tuberculous Sputum: A Study as to the Cause of the Great Degree of Immunity Against Tuberculosis Enjoyed by Those Living in High Altitudes.

William C. Mitchell and H. C. Crouch, of Denver (*Journal of Pathology and Bacteriology*, May, 1899), after a number of experiments upon the influence of sunlight on tuberculous sputum, summarized the results obtained by them as follows:

1. That the tubercle bacillus as expectorated on a sandy soil is still virulent after thirty-five hours' exposure to the direct rays of the sun in this altitude.

2. That some sputum has suffered but little appreciable diminution in virulence after twenty hours' exposure.

3. When after twenty to thirty-five hours' exposure the virulence is gradually diminished and finally lost, the exposure extends beyond the last mentioned time.

The writers say that the conclusion which must come as to the infectiousness of the sputum as expectorated by consumptives in this altitude while engaged in their daily avocations is that such sputum had ample time to become desiccated and blown in the atmosphere before being robbed of its power to cause tuberculosis if inhaled by susceptible individuals. Since there unquestionably exists a great degree of immunity against tuberculosis in this region and at this altitude, its explanation must be sought on other grounds than that exposure to sunlight robs the expectorated matter of its virulence before it is blown about and inhaled. In high altitudes both the absolute and the relative moisture is low, and this, together with a much lessened atmospheric pressure and almost constant winds of greater or less degree, greatly facilitates evaporation. Thus there are created conditions extremely favorable in the abstraction of moisture by the atmosphere from whatever substances it comes in contact with. Moist surfaces of the lung, in common with other moist surfaces, must suffer considerably more loss from moisture at this altitude than at lower ones, and it is this constant battle for moisture compensation, especially as it occurs in the lungs, that we believe to be one and by no means the least of the factors which either aids in granting such a large measure of immunity against tuberculosis here or in arresting

or retarding such processes in their incipiency. We know that the tubercle bacillus grows but poorly or not at all in media deficient in moisture, and while it hardly seems possible that there could be moisture enough extracted to leave the alveolar linings in a state too dry to offer a suitable nidus for the invading bacillus, yet it is not improbable that this constant and rapid pulmonary evaporation creates conditions extremely unfavorable to its development.

Prevention of Valvular Disease of the Heart.

Richard Caton, M.D., F.R.C.P. (*Edinburgh Medical Journal*, April, 1899), many years ago asked himself the question, Are there no means of preventing the cardiac complications of acute rheumatism? Endocarditis sometimes subsides spontaneously. Can it not be rendered less frequent? Cannot nature be helped to produce as complete a cure in the heart as in the joints? For eighteen years, whilst treating in hospital about 350 cases, these inquiries have always been before him. Most practitioners regard prevention of heart disease as hopeless; so did the author at one time. But experience has convinced him that much may be done to prevent and arrest rheumatic endocarditis.

During the acute period the author keeps the patient at rest in bed, and clothed from head to foot in warm flannel. Gentle cholagogues and salicylates are given. The heart is examined daily. If pain does not yield in any joint, it is quickly dispelled by one or two small blisters. After the pain and fever subside, to prevent relapse and endocardial trouble, rest is still enforced, and the salicylates in smaller doses are continued. Under this treatment eighty-two or eighty-three per cent of the cases have no cardiac trouble.

If endocarditis occurs, as soon as there is muffling of the first sound at the apex (which usually precedes the murmur) Dr. Caton applies small blisters, not much larger than a shilling, successively in the course of the third, fourth, fifth, and sixth intercostal nerves. The patient is kept absolutely recumbent for several weeks. In addition to salicylates eight or ten grains of sodium or potassium iodide is given three times a day—in the hope of facilitating absorption of inflammatory products. In about five-sevenths of the cases the murmur sooner or later gets soft, becomes variable, and disappears; in about two-sevenths it persists. Before he adopted this method recoveries were less than two-sevenths, and persistent valvular disease more than five-sevenths.

Dr. Caton admits that possibly the prolonged rest is the essential part of the method. An unfavorable fact is that if after endocarditis

the murmur disappears, it almost certainly returns in case of relapse or of a second attack of rheumatism within a few months. In several cases a repetition of the treatment removed it; in others it persisted. In murmurs of long standing this treatment is useless.

Deep and Surface Temperature of the Human Body.

M. S. Pembrey and B. A. Nicol (*Journal of Physiology*, vol. xxiii, p. 386) give the results of a large number of observations made upon the deep and surface temperature of healthy persons under various conditions. The following are amongst the most important results obtained:

1. The average rectal temperature for the twenty-four hours is 98.2° F.; that of the urine is 98.6° F.

2. The average for the time of activity (7 A.M. to 11 P.M.) is 98.5° in the case of the rectum, 99.1° in the urine; the respective values for the period of rest (11 P.M. to 7 A.M.) are 97.4° and 97.6°.

3. The maximum daily temperature is reached about 6 P.M., the minimum about 2 A.M.

4. Muscular exercise produces a marked rise in the internal temperature; mental work has very little influence, while rest and sleep cause a decided fall. The latter, indeed, is the most important factor in producing the fall in the curve of daily temperature.

5. Food produces a slight rise in temperature.

6. The temperature of the rectum shows an average excess of 1.1° F. over that of the mouth. The latter is not an exact measure of the deep temperature; it is unreliable, especially after severe exercise or in cold weather.

7. The surface temperature of the skin of the parts covered by the clothing is fairly constant.

Acute Diffuse Gonococcus Peritonitis.

Harvey W. Cushing (*Bulletin of the Johns Hopkins Hospital*, May, 1899) has from his studies in this matter come to the following conclusions:

1. The gonococcus is capable of causing a specific infectious disease, namely, gonorrhea, and at the same time other and less specific pathological conditions.

2. There is experimental proof that in certain small animals the gonococcus can set up acute alterations in the peritoneum homologous with the acute septic serositides in man, but differing from these in their tendency to rapid and spontaneous healing.

3. Hitherto there has been wanting conclusive proof that in the

peritonitides attendant upon gonorrhea occurring in women, the gonococcus was solely or chiefly concerned. The inflammations had been variously regarded as mixed infections and chemical inflammations.

4. The cases reported in this paper bring for the first time convincing evidence of the existence of a diffuse general inflammation of the abdominal cavity caused by the gonococcus.

5. It has been recognized that extension of the gonorrheal infection from the genital organs to the peritoneum may occur in the puerperal state; a similar sequel is shown to be possible during menstruation.

6. Such ascending forms of gonorrhea doubtless under ordinary circumstances remain localized in the pelvis, and rarely demand surgical investigation in the acute stage.

7. A general involvement of the peritoneum, such as occurred in the two cases given, must either be rare or unrecognized, and may depend upon some especially receptive condition of the serosa or virulence of the organism.

8. The peritoneum is not more immune than is the pericardium or endocardium to gonococcal infection, and being more exposed suffers more commonly in females, although the relatively benign course of the disease makes it a rare condition to come to the attention of the surgeon in the acute stages.

Pneumonia and Cerebrospinal Meningitis.

At a recent meeting of the Parisian Académie de Médecine (*Medical Press*, May 24, 1899), M. Rendu said that he had treated a child of five years who had been suddenly seized one night with severe rigor, followed by high fever and delirium. The following day she was in a comatose state, the pupils contracted, the pulse 140, and the temperature 106° F. Nothing was observed at that time in any organ. The evening of the same day a bath at 92° F. was given and an enema of eight grains of antipyrin, which produced abundant perspiration and a slight improvement of the symptoms. The treatment was kept up for four days, and at the end of that time pneumonia of the apex of the right lung appeared. The cold baths were continued, and soon an improvement of all the symptoms was manifest, but a few days afterwards the child presented all the signs of cerebrospinal meningitis (stiffness of the neck, contractions of the jaws and limbs, the sign of Kering, rise in the temperature, etc.). At the same time the pneumonia reappeared, and warm baths were substituted for the cold baths, and four ounces of artificial serum was injected daily; small doses of calomel and bromide of potassium completed the treatment. A fortnight subsequently the child had fully recov-

ered. The speaker concluded by saying that although the direct examination of the cephalo-rhachidian liquid was wanting in this case, he believed that the microbe which provoked simultaneously the pneumonia and the meningitis was a pneumococcus.

Diphtheria: The Serum Treatment in General Practice.

P. H. Lyon (*New York Medical Journal*, June 3, 1899) has from his experience with antitoxin in the treatment of diphtheria drawn the following conclusions:

1. Antitoxin, to be efficacious, should be administered early, the first three days being the reasonable time to expect good results.

2. The greater the time which elapses before the first dose, the poorer the patient's chance of recovery.

3. When immunized persons and those not so treated are exposed to the same chances of contagion, the immunized escape, and those not so treated "take" the disease. We may, therefore, conclude that all exposed individuals should be at once immunized.

4. As severe cases which, ordinarily treated, terminate fatally yield readily to this treatment, it is certainly to be regarded as good routine treatment, and as the early treatment is the secret of success, the serum should be employed in all cases in which diphtheria is even suspected, even before the bacteriological diagnosis is complete, it being perfectly harmless if properly administered. By this he means that the serum should be of standard preparation and not six months old, and that perfect asepsis is the rule.

5. The only unpleasant effect is that sometimes a slight urticaria is observed about the site of inoculation (occasionally becoming general). This gradually passes away in the course of a few days, and is of trivial importance.

Meat Extracts.

An interesting account of the history and preparation of meat extracts was recently given as a lecture before the Society of Arts (English) by Charles R. Valentine (*Popular Science Monthly*, June, 1899). The idea of concentrating the body of an ox into a thimbleful of elixir seems to have been a very old one. Until the work of Justus von Liebig about fifty years ago, however, little progress of practical value was made toward this end. Liebig macerated finely divided beef in cold water, or in water not above 150° F. The water dissolved from sixteen to twenty-four per cent of the weight of the dry flesh. This infusion was heated, and albumin and red coloring matter of the blood coagulated, and was separated as a flocculent

precipitate. The remaining solution has the aromatic taste and all the properties of soup made by boiling the flesh. The infusion was then evaporated at a gentle heat. The residue amounted to about twelve or thirteen per cent of the original (dry) flesh. This is in rough outline the process of meat-extract making. This extract is simply an evaporated beef tea, containing the extractive matters of beef, and in virtue of these possesses medicinal and dietetic properties of value. But it is in no sense a substitute for beef, as it does not contain the latter's most important food constituent—albumin.

The Treatment of Diphtheritic Paralysis.

Francis Huber, in *Pediatrics* of June 1, 1899, says that in the treatment of this condition absolute rest should be insisted upon, patient kept in a well-ventilated room, and the usual hygienic and sanitary measures carried out. Should it be considered advisable to take the little patient up or out, great care should be observed, and the upright position assumed very gradually.

The general condition must be improved by good food, good air, tonics, particularly iron in a digestible form. The remedy *par excellence* is strychnine, which should be given in full doses, per mouth, or in severe cases hypodermically. Recently, in a bad case, a child thirty months old, strychnine nitrate, $\frac{1}{50}$ grain, was administered hypodermically twice a day for two weeks, and subsequently once a day for some weeks longer, with excellent results. Under ordinary circumstances, and in mild cases, the remedy may be given by mouth in divided doses three times a day. The strychnine should be given subcutaneously when the constrictors of the pharynx are involved, when the heart or respiration shows the toxic effects of the diphtheritic poison, or when the muscular incompetency is pronounced.

Arrest of Obstinate Hiccough by Depressing the Tongue.

Louis Kolipinski (*Maryland Medical Journal*, Feb. 25, 1899) says that a man aged fifty-nine, with a vigorous constitution somewhat impaired by alcoholism, had chronic gastritis. Persistent hiccough began, which kept him awake at night. He became too weak to work and remained in bed. On the fifth day he was much alarmed and declared that the hiccough was killing him. He complained of fulness in the throat. On depressing the tongue the soft palate was seen to be congested and the uvula thickened and elongated; hiccough recurred twice; each time the soft palate was elevated. The pressure on the tongue was continued with the object of noting the action of the palatal muscles. But the hiccough ceased. An hour later the hic-

cough returned. The patient placed himself before a mirror and depressed his tongue with a spoon-handle. The hiccough at once ceased. He passed a comfortable night. In the morning the hiccough returned, but it ceased when he got up. Two days later it reappeared, but was promptly arrested by the same means.

Idiosyncrasy to Eggs.

A correspondent writes (*British Medical Journal*, March 11, 1899): "A healthy young lady has symptoms of acute poisoning whenever she takes egg in any form and in the minutest quantity, the severity of the attack being in proportion to the amount taken. Almost immediately she has rigors and vomiting; in a very short time the tongue becomes parched and dry, the throat sore, and there is severe headache and pain in the back. The very smallest quantity of egg, no matter how disguised in any other form of food, will produce symptoms more or less severe. They may continue from a few hours to two days. A tiny particle of the white placed on the skin produces nettle-rash."

SURGERY.

Tuberculosis of the Bones and Acute Miliary Tuberculosis.

Dr. Benda, at a recent meeting of the Berlin Surgical Society (*Medical Press*, May 24, 1899), read a paper on this subject. He said that experience taught that general tuberculosis not infrequently followed operation for tuberculous disease of bones, and it was assumed that there was a direct connection between the operation and the succeeding disease, inasmuch as at the operation the veins of the bones had been opened and the tubercle bacilli had passed into the system through them. By Weigert's investigations and the proof of the penetration of the bacilli into the blood-vessels, this assumption had fallen to the ground. Weigert had shown that penetration from a tuberculous center took place into the great veins, or into the thoracic duct, and that no increase in the bacilli took place. From this arose a doubt as to whether disease of the bones afforded sufficient material for such a flooding of the system, and whether the small veins of the bones were large enough for the purpose. According to many authors, more remote penetration had also taken place, and penetration from diseased centers into a cerebral sinus had been proved. The speaker's own material consisted of three cases, in which general tuberculosis had followed operations on bones. In all three cases penetration disease had been proved. Two were cases

of tuberculous coxitis, and one of caries of the vertebral column. In one case Weigert's tubercle of veins, and twice tuberculous endarteritis of the aorta and mitral valves, were present. Here there was enormous growth of tubercle bacilli. But a conclusion here as to the relation of cause and effect between the operation and the subsequent miliary tuberculosis would be too hasty, as it was only an accidental one. From his searching investigation it was shown that the disease started in the intima of vessels. Here took place the first metastasis into the bones, leading to tuberculous disease into them, and also to general tuberculosis. From this, therefore, there must be a limit to Weigert's conception as to relationships.

The Comparative Efficiency of Wet and Dry Surgical Dressings.

R. H. Skillern (*Philadelphia Medical Journal*, May 20, 1899), in comparing the efficiency of wet and dry surgical dressings, makes the following summary:

1. A dry dressing is superior to a wet one in incised wounds.

2. In contused and lacerated wounds a wet dressing should be employed for a week or two, followed by a dry one.

3. In carbuncles, boils, and infected wounds a wet dressing is indicated.

4. When pus has burrowed and sinuses exist, packing and a dry dressing are preferable.

5. In deep punctured wounds with a small orifice, a wet dressing is best.

6. In all wounds of the scalp, whether infected or not, we should use a dry dressing.

Some of the Uses of the Roentgen Light.

F. H. Williams, in the June number of the *American Journal of Medical Sciences*, says that in a general way *x*-ray examinations may be said to have thus far been most used to detect foreign bodies or changes in shape or composition of bones, as in fractures, dislocations, necrosis, tuberculosis, rickets, and osteomalacia. In medicine the Roentgen light may be used to distinguish gouty deposits about the joints from rheumatoid arthritis. The stomach may be examined by giving the patient a large dose of subnitrate of bismuth (which the *x*-rays do not easily traverse) with food, and then looking at the shadow of its contents by means of the fluoroscope. The writer says that in many cases of carcinoma of the stomach he had examined with the fluoroscope if the growth could be seen it could be felt. The

surface of ascitic fluid may be seen in the fluoroscope if the patient is examined lying on his back, the physician looking through the body transversely. Renal or vesical calculi containing phosphate or oxalate of calcium have been detected by an *x*-ray photograph. One of the most useful medical applications is either in or contiguous to the thoracic cavity. Many thoracic aneurisms which were formerly beyond our reach for diagnosis may now be recognized with certainty. In emphysema, the excursion of the diaphragm is less than in health. In pleurisy of large effusion the heart is much displaced. Calcareous deposits in the pleura are to be seen as dark areas in the fluoroscope. In pneumonia the dark area of the pneumonic process is seen, and further, the excursion of the diaphragm is less than normal.

Multiple Metastatic Angiosarcoma.

H. B. Würdemann (*American Journal of Medical Sciences*, June, 1899) says that when sarcomatous neoplasms are found in the orbit or adjoining cavities of the head, this region is the primary place involved in the disease, and when metastasis occurs in the abdominal cavity the vesical structures are secondarily affected. These tumors likewise infiltrate the tissues of the adjacent regions. The diagnosis of orbital sarcoma, particularly when attended by metastasis, is usually made too late to save the life of the patient by any operation. When metastasis has occurred removal of the primary focus or of the secondary growths will not prevent recurrence, although in some instances life may be prolonged. By this important structures have been implicated through metastasis or infiltration, the involvement of which causes death. The angiosarcomatous form of orbital sarcoma is due to metastasis and is fatal from its inception.

Habitual Luxation of the Kneecap.

Hoffa, of Würzburg, presented recently before the Berlin Surgical Society a girl who some years ago experienced a sudden pain in the knee and fell down. Since that time the condition had become worse, and the girl came to the hospital. As soon as she went a few steps the patella became displaced, she had violent pain in the knee, and fell down. Various kinds of bandages were tried, without avail. Le Dentu had proposed the following operation in such cases: A transverse fold was to be formed in the capsule of the joint, stitched into the form of a roll, whereby the capsule was shortened. The speaker operated in his case in that way, and got an excellent result. The patella remained firm, and a previous atrophy of the quadriceps quickly improved.

Prevention of Gonorrheal Infection.

Dr. Monroe (*International Medical Magazine*, May, 1899) advises the following method of preventing gonorrhea: The patient is ordered to urinate immediately after coitus and wash his genitals with tar soap and water. Then inject one drachm of a solution of permanganate of potash (one drachm to six fluidrachms of water), and immediately allow it to pass out, after which another drachm is injected and retained for about a minute by closing the meatus with thumb and finger. A small piece of cotton is saturated with the medicine, and the penis and scrotum washed, allowing them to dry without the use of towel. The results are claimed to be satisfactory.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Osseous New Growth in Trachea.

In the literature bearing on this subject some seven cases have been reported. Chiari reported the first case at length in 1878. Various other cases have been reported by Eppinger, Ganghofer, Solis Cohen, Denning, Heymann, Asch, and von Recklinghausen. All the observations go to show that the growths are originally ecchondroses and become slowly transformed into bone.

Dr. H. von Schrötter reports two cases of this character. In the first, that of a woman seventy-one years old, the abnormal development occupied the anterior and left wall of the trachea from the fifth to about the ninth tracheal ring; the posterior wall was free. There were white stiff protuberances, with deep grooves between, projecting slightly into the lumen of the trachea. In this case the bony growth had not menaced the health or comfort of the patient to any serious degree.

In the second case, a railroad official thirty-three years old, the appearances and symptoms were quite different. On examining the trachea there was to be seen at about the height of the eighth tracheal ring a stiff white translucent growth something larger than a pea in size, occupying the right and posterior wall, and projecting into the lumen of the tube. The symptoms produced by its presence were the sensation of a foreign body, the feeling "of a thorn boring into the wall of the windpipe," and during the last few months recurrent attacks of dyspnea. Dr. Schrötter operated under cocaine anesthesia. The patient held well, and at the second attempt he was able to grasp and break away with the Schrötter laryngeal forceps a piece about six

millimeters long, four millimeters wide, and four in thickness. At a later sitting he removed a piece eight millimeters in length. The patient was completely relieved of his unpleasant symptoms. Microscopical examination of the portions removed established the correctness of the diagnosis. The preparation exhibited the lamellæ of pure bony tissue with the lacunæ filled in part with fat cells. On the border of some of the bony portions were rows of osteoblasts and multinuclear cells, giving a clue to the histogenesis of the growth and its change from cartilage into bone.—*Wiener Klinische Wochenschrift*, vol. xii, No. 15.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Pathology of Epilepsy.

Inasmuch as we have before called attention to some of the more recent work in this line, notably that of Rachford, as tending to prove that an excess of paraxanthin is responsible for the symptoms of epilepsy and migraine, and that of Krainsky in the attempt to demonstrate that carbamate of ammonium is the chief offending factor, it is of especial interest to note that, at the recent meeting of the Association of American Physicians (reported in the *Medical News* of May 13), Drs. Franz Pfaff and J. J. Putnam, of Boston, reported some experimental researches tending to disprove Rachford's conclusions as to the cause of migraine, their work leading them to the belief that his "results obtained from experimentation with final fluids were due to the fact that ammonium salts were not thoroughly removed."

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

A New Agent for the Treatment of Alopecia Areata.

In a paper read before the District Medical Society of Southern California in May, 1899, Dr. Granville MacGowan, professor of dermatology in the University of Southern California, says in speaking of the new agent trikresol: "The first application is preceded by thorough cleansing of the patch by benzine. The remedy is applied pure to the scalp, and in fifty-per-cent solution with alcohol to the face, with or without epilation. It is well rubbed into the denuded

patches, and into the roots of the hair for a half-inch surrounding each patch, by the friction of a small swab of cotton tightly wrapped about a wooden toothpick, and causes immediately a burning pain, which is readily borne even by a child, if told beforehand that it will hurt a little. This pain passes away nearly always in a few minutes, but sometimes lasts, but not severely, for a half-hour. The skin turns pearly-white almost instantly; the hair and sebaceous follicles come plainly into view, seeming to gape. The primary whiteness is followed in a few hours by a circumscribed hyperemia, occupying the same area. On the scalp there is a very slight transudation of serum; on the face occasionally vesication is more pronounced. Within twenty-four hours there forms a dry, brownish, or brownish-red, superficial scale, which falls in from four to ten days, when a new application is required. When the scale falls, it leaves the scalp hyperemic and more tender than at first, and the remedy should not be applied so vigorously the second time, so as to avoid all unnecessary pain. I have never seen it cause a slough or scar."

A Case of Erythema Induratum.

At the regular meeting of the New York Dermatological Society, held December 20, 1898 (*Journal of Cutaneous and Genito-Urinary Diseases*, May, 1899), Dr. Bronson presented the following case: The patient was a girl, sixteen years old. The eruption had first made its appearance six years previously. In its general characteristics it resembled Bazin's *érythème induré des scrofuleux*. This patient, however, showed no evidences of strumous disease, and there was no history of tuberculosis in the family. She was well nourished, robust, with rosy cheeks. The individual lesions were indurated, more or less subcutaneous at first, and became purplish in color as they approached the skin. During the warm weather the disease is inclined to become quiescent, the lesions losing their purple color and becoming white, like the healthy skin, to relapse again in the same places on the approach of winter. In one place a nodule had broken down, leaving scar tissue. Dr. Bronson said the only other disease with which this eruption could be confounded was syphilis, and it would hardly be possible to have syphilitic eruption remain in one location six years without undergoing any marked changes.

Eczema Treated by X-rays.

In the *British Medical Journal* of April 29, 1899, C. Thurston Holland, M.R.C.S., reports a case of eczema treated by *x*-rays. On December 7, 1898, P. T——, a young woman aged nineteen, gave the

following history: About a year ago she was operated on for a swelling of the left hand, over the metacarpal bone, and pus was evacuated. The wound soon healed, but immediately afterwards an eruption broke out around the scar and gradually extended over the back of the hand and up the fingers. For five months she had been attending as an out-patient at the skin department at one of the hospitals, but stated that the affection was getting worse and worse. A chronic eczematous eruption covered the whole dorsum; the skin was thickened, very scaly, and cracked all over, and there was a large number of adherent black scabs, the largest just between the bases of the middle and ring fingers.

The hand was exposed seven times between December 7, 1898, and January 3, 1899, to an active *x*-ray tube. The apparatus consisted of a ten-inch coil, worked from a six-cell accumulator through a resistance, and fitted with a mercury interrupter. The lower edge of the glass of the tube was distant from the hand from four to seven inches; each exposure was fifteen minutes in duration. No inflammatory change was noticed at any time. On the date of the last exposure the scabs were loose and were picked off, and most of the scales had also disappeared; a small ulcer was found under the large scab referred to above. No further treatment was adopted, and in February all eczema had disappeared, and the hand was well.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Observations on Thyroid and Parathyroid.

W. Edmunds (*Journal of Pathology and Bacteriology*, May, 1899), who has made an extended number of experiments, finds that the excision of the parathyroids in dogs causes a mortality which is considerably less than after excision of thyroids and parathyroids together. The symptoms produced were the same.

Sometimes there is exophthalmus, sometimes enophthalmus; and exophthalmus may be sometimes converted into enophthalmus by excision of thyroid lobes. The writer states that the thyroid lobes left in these operations are not enlarged, but possibly diminished in size. They often show microscopically the compensating hypertrophic changes, and total thyroidectomy in monkeys may be followed by enophthalmus as the rule, exophthalmus as the exception. Thyroid feeding in monkeys may produce exophthalmus.

THE MEDICAL AGE

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ORIGINAL CONTRIBUTIONS.

ACUTE CATARRH OF THE MIDDLE EAR AS A SEQUEL OF LA GRIPPE.

BY SAMUEL W. SMITH, M.D., NEW YORK.

In presenting this paper on otitis media as a complication of la grippe, it is not my purpose to discuss the latter, but merely to say in passing that la grippe has had many synonyms, and perhaps the best is the one often used by the intelligent laity, "catarrhal fever."

The process of inflammation of the middle ear may result in an effusion of serum, blood, laudable pus, or purulent exudation, but the first merges into the latter by such close gradations that it is not easy to differentiate, and quite unimportant as regards treatment when the attack is severe. An experience of several months in the New York and Manhattan Eye and Ear Infirmaries gave me the impression that there is no disease so common and so destructive to an important organ of the body that is so generally overlooked by indifference to results and want of intelligence in treatment. The ordinary history of deafness from this cause is that the victim of otorrhea, suffering for years, not only with the loss of hearing but with a profuse and offensive discharge from the ear, will give a shocking information that the physician who attended him at the time of his first earache, and subsequently when a profuse and irritating discharge had set in, said, "Do nothing," or "Syringe the ear with soap and water." So does the average physician dismiss the case, without any knowledge whatever of the pathological lesion which has taken place, entailing upon the sufferer, in many cases, lifelong disease, where a judicious and timely interference would have been followed by the happiest results.

Prominent among the earliest and subjective symptoms of this trouble is a deep-seated pain, lancinating or throbbing in character,

synchronous with the pulsation. Pain is increased by talking, sneezing, blowing the nose, deglutition, or any sudden expiratory act through the nostrils, etc. Walking about the room seems to give relief, and the recumbent position increases the pain. A tickling and itching sensation is experienced at the pharyngeal orifice of the Eustachian tube, extending along its course to the middle ear, with dulness of hearing and tinnitus aurium in the affected ear. The pain, at first only referable to the ear, after a few hours may, and frequently does, extend to the eye, temporal region, and forehead, along the side of the head to the occipital region, over the mastoid process, and down the neck. The pain now becomes intense; the pulse is accelerated; the tongue coated, with red edges. There is loss of appetite and rapid rise of temperature (101° to 103°), vertigo, and delirium. What seemed a favorable termination of la grippe now assumes a serious process of inflammation.

If early in the disease the drumhead be examined with a conical ear speculum and reflected light, it will be seen to have lost its grayish hue and bright triangular spot, and red lines appear along the handle of the malleus; later on the drumhead is no longer concave from an external view, but is convex and bulging out into the external meatus. If the disease is to terminate favorably, the occlusion of the Eustachian tube will give way and the exudative material of the tympanic cavity pass through it into the throat, or it may be that a rupture of the drumhead takes place and the contents of the middle ear pass out through the external canal. However, not infrequently new connective tissue bands have been formed, connecting one or more of the ossicles to the walls of the tympanum, and by this seemingly favorable termination of the disease a permanent impairment of hearing may be established. If paracentesis be performed early in the disease, and the contents of the tympanum allowed to flow out, followed by the application of two or three leeches to the base of the tragus and over the mastoid process, the disease may be cut short, and resolution take place without leaving behind one trace of the inflammatory process.

Usually the attending physician fails to appreciate the great importance of a judicious and timely interference with the course of the disease, and about seventy-five per cent of patients so affected lose their hearing to a greater or less extent. If the disease becomes chronic, the condition is not only extremely disagreeable, but dangerous to the life of the sufferer. Especially is this the case with a patient of a strumous diathesis or one tainted with syphilis. If the disease extends into the mastoid cells, which frequently occurs, we may have, months after the acute attack, a periostitis over the mastoid process, giving rise to the most distressing and painful symp-

toms, resulting in a mastoid abscess. Or the ulcerative process may attack the bony structure of the ear and establish caries of the part, which may extend to the diploe of the petrous portion of the temporal bone, and give rise to pachymeningitis or pyemia. Thrombosis frequently results, and when the diploe of the bone is the seat of ulceration, emboli may pass through the petrosal and lateral sinuses into the jugular vein, pass through the right heart, and thus give rise to metastatic abscess of the lung. The internal carotid may be attacked by the ulcerative process, followed by perforation and death.

In periostitis of the osseous portion of the external auditory canal, the points in differential diagnosis are more difficult to make out by the subjective symptoms. However, the following points may lead to a correct diagnosis: In periostitis there is usually an itching or tingling sensation experienced along the wall of the osseous portion of the external auditory canal. In otitis media, if these symptoms are present, they are referable to the pharyngeal orifice of the Eustachian tube and travel along the tube to the middle ear. In periostitis the pain gradually increases, while in otitis media the pain is suddenly developed; in periostitis deafness and tinnitus aurium, if they are present, always follow the pain, while in otitis media the deafness and tinnitus aurium always accompany the pain. Again, the speculum will aid in drawing the line between these two diseases, for in periostitis the membranum tympani is rarely the seat of any special change, while in otitis media the membranum tympani is always changed in its appearance. If any doubt still exists, explore the walls of the external auditory canal by means of a blunt-pointed probe and make gentle pressure in every portion of the canal; when the point of periostitis is reached, extreme pain is produced. In otitis media there is rarely any unusual tenderness in the external auditory canal.

Case 1.—Mrs. R——, aged forty years; otitis media; paracentesis and cure. I was called to see this woman December 1, 1890. Patient informed me that she had suffered from a severe cold in the head for the past two or three days, and during the day of my first visit had had a severe chill. I found the patient suffering with la grippe, accompanied with a pretty sharp attack of acute bronchitis. Face flushed, skin hot and dry, a severe dry cough, racking headache, pains in chest, back, and lower extremities, with intense prostration. Temperature 102°, pulse 100, respiration 30. Patient did well under appropriate treatment until December 11, when I discontinued daily visits. December 13 I was summoned in the night to the bedside of my patient, and found her suffering the most intense pain in the right side of her head and ear. I prescribed an opiate and filled the ear with warm olive oil and opium. December 14, an examination with a

speculum and reflected light showed the drumhead of the affected ear bulging out into the external meatus. I came prepared, and performed the simple operation of paracentesis. A discharge gushed from the ear; the pain subsided in a few moments, and by appropriate treatment the patient made a good recovery in the course of a few days. I saw the patient several months afterwards, and an examination revealed the fact that the drumhead and other parts of the ear were in a perfectly healthy condition.

Case 2.—F. H. W——, male, aged thirty-seven years, bookkeeper, applied at my office for treatment March 5, 1891. Patient complained of deafness and pain in left ear, with a slight discharge, and gave the following history: At three years of age he suffered from an abscess of affected ear, which discharged at irregular intervals for more than twenty years. At the age of twenty-seven he contracted syphilis, treatment for which lasted nine months. Ear remained in a seemingly healthy condition, with the exception of deafness, until December, 1890. Following an attack of la grippe he had earache, and it began to discharge again, accompanied with more or less pain, loss of appetite, and restlessness. Examination showed the drum and small bones of the ear gone and the tympanic cavity filled with bad-smelling caseous pus. Turgescence and tenderness upon pressure over the mastoid process. Temperature 101°; pulse 106, and feeble.

Treatment consisted in syringing out the ear with a warm bichloride solution 1:5000, thoroughly drying with borated cotton, and applying iodoform to the middle-ear cavity. I also prescribed two-grain doses of quinine and milk punch every four hours, and applied oleate mercury and morphine over mastoid process night and morning. March 6, 7, 8, 9, 10, and 11, the same treatment was religiously pursued, and the patient seemed much improved; he was stronger, had a better appetite, rested better nights, and his temperature ranged from normal to 99½°. March 12 the patient felt so much better that he came to my office, and while waiting to see me was attacked with violent rigors, fever, and sweating; temperature 104°. Patient sent home and put to bed; he was given fifteen grains of quinine, and two leeches applied over the mastoid process. March 13 the patient had rigors, and sweating morning and afternoon; temperature 99° to 102½°. Ear thoroughly cleansed and iodoform applied as usual. March 14 the condition of the patient was unchanged. I decided to trephine the mastoid, but the surroundings being unfavorable, I induced the patient to go to the Manhattan Eye and Ear Hospital. The records show that little change took place in his general symptoms during his stay, from March 14 to 20, and no operation was performed.

March 20 patient was removed to St. Luke's Hospital, and the

records of that institution show the following termination of the case: "March 20, admitted F. H. W——, aged thirty-seven, suffering with pyemia and suppurative otitis media. A severe rigor during the afternoon, and temperature reached 105°. March 21 patient was removed to the surgical side, and after a consultation the visiting surgeon made an incision over the mastoid and trephined, and at the greatest depth a little pus was found; a portion of the lateral sinus exposed. Anterior to this, softened, bad-smelling, necrotic bone was found and removed. After syringing out the cavity with a bichloride of mercury solution, a considerable amount of caseous matter was discharged from the external meatus. March 22, irregular temperature, 101° to 103°. March 23, consolidation of apex of right lung. March 24, 25, 26, respiration 40 to 50; pulse 120 to 140; temperature 101° to 103°. March 27, symptoms of fluid in right chest; aspirated 1.30 A.M. Patient's general condition seemed improved, but during the day he had a distinct chill, lasting twenty minutes, and the temperature went up again to 105°. March 28, breathing labored and shallow; pulse rapid and feeble; and at 7.30 P.M. F. H. W—— died of septic pneumonia due to pyemia from otitis media."

Case 3.—T. B——, aged four years; otitis media; application of leeches, and cure without rupture of drumhead. I attended this case for la grippe for one week in November, 1891, when I was called in the early morning to see the child suffering with earache. A speculum examination revealed a slight bulging of the drumhead, and signs of an inflammatory process going on inside. The patient being very nervous and irritable, I abandoned the idea of paracentesis for the time being, and instead applied two leeches to the base of the tragus, gave a calomel and saline purge, and ordered the child kept quietly in bed, lying on the side of the well ear, and warm water put in the affected one. The following day I called to perform the operation of paracentesis, if the painful symptoms were not mitigated. I found the patient sitting up in bed, and apparently free from all ear trouble. This case went on to a rapid recovery, and on the third day following the patient was about the room playing as usual.

Case 4.—Infant ten months old; otitis media; spontaneous rupture of the drumhead. This case is the infant sister of Case 3. In December last I was called to see the patient and found her suffering with la grippe, complicated with bronchopneumonia. After three or four weeks' illness the little patient made a fairly good recovery from the pneumonia, but was fretful and partook of its nourishment badly. A change of air was recommended, and the child was taken to Atlantic City. The mother, who called at my office May 3, informed me that after their arrival in Atlantic City the baby grew worse, and after cry-

ing incessantly for one whole night, the following day one of the ears began to discharge profusely. An examination revealed a perforation of the drumhead, out of which oozed a mucopurulent discharge. The edges of the perforated drumhead were touched twice a week with a strong solution of nitrate of silver, and a lukewarm solution of one grain of sulphate of zinc and one-fourth grain of permanganate of potash to the ounce of water was poured into the ear twice a day. I saw the little patient three weeks after the treatment was commenced; the perforation was almost closed and the discharge much lessened.

Professor Agnew, in a lecture at the College of Physicians and Surgeons on "Otitis and its Prophylactic Treatment," says: "First, then, we would that every medical man should be able to distinguish the drumhead or membrana tympanum—not one in a hundred can. Five minutes spent daily for a week in looking into the external auditory canal of a healthy ear, through a conical speculum, would enable one with ordinary powers of observation to avoid many of the catastrophes in treating common ear diseases."

Professor Roosa says in his work on the ear, page 17: "A singular apathy in regard to the maladies of one of the most important organs of the body, an inexplicable ignorance as to their results, a most irrational and empirical manner of treatment, have been our heritage from the fathers. Probably to-day, in the closing years of the nineteenth century, there are more practitioners of medicine who view aural medicine and surgery from the standpoint of the errorists of the dark ages than there are in any other field."

Professor Roosa and other distinguished scientists in articles upon this subject are of the opinion that the average physician should, and with a little attention to the anatomy of the ear can, be prepared when called to see one of these cases in the first or second stage of the disease, by the aid of the paracentesis knife, to prevent in at least seventy-five per cent of those suffering from otitis media any impairment of hearing whatever.

Neimeyer, on "Causation of Pachymeningitis Due to Thromboses of the Cerebral Sinuses," says (vol. ii, p. 206): "The numerous patients suffering from tedious otorrhea as a result of otitis interia are constantly threatened as with a 'Damocles' sword' by inflammation or thromboses of these sinuses."

In conclusion, permit me to say I think a large percentage of these cases of acute otitis media might be cut short or aborted by local depletion and a little active purgation, if seen at the onset of the disease.

DEFORMITIES (ILLUSTRATED).

BY DANIEL LA FERTÉ, M.D.,

Professor of Anatomy, Orthopedic Surgery, and Clinical Surgery in Detroit College of Medicine; Surgeon to the Children's Free Hospital and to Harper Hospital; Member of the American Medical Association, of Michigan State Medical Society, of Detroit Medical and Library Association, of Detroit Academy of Medicine, of Wayne County Medical Society, etc., etc.

If the Children's Free Hospital was not dispensing its charity over a wide field it would not be fulfilling the hope of one of its chief benefactors. When that great philanthropist and broad-minded citizen, Mr. Hiram Walker, made it possible, through his generosity, to have the disabled children of the poor of the city of Detroit taken care of, he hoped that others outside of the city would lend financial aid to the trustees of the Children's Free Hospital Association, in order that sick or crippled children of the poor in their midst might be restored to health and made useful members of the community.

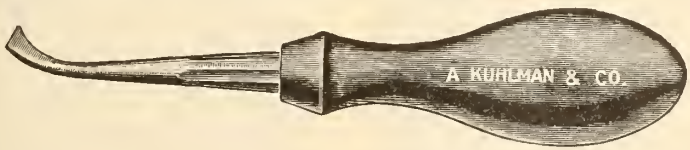

FIG. 1.—La Ferté's Periosteum Elevator.

It was Mr. Walker who during his lifetime, at the cost of a large sum of money, built and turned over to the trustees of the Children's Free Hospital Association that magnificent building, and who in his last will made provision for a liberal endowment in order that the hope cherished during his lifetime might be realized after his death.

It is evident that the charity work done in this hospital appeals to the sympathies of the people over a wide expanse of country. A glance over the register of the institution shows that children from far and near are received and cared for, the financially able and the charitably inclined in the section of country from which they come being only too ready to lend financial aid to the hospital, thereby enabling the trustees to extend their charity outside of the city of Detroit. As far as their means will permit, the trustees will admit to the hospital all crippled or deformed children, the only condition being that they be unable, through lack of means, to procure the necessary medical or surgical aid.

Naturally in a hospital for children much of the surgical work met with is of the orthopedic variety, and some of the most interesting

cases we have to report are of that nature. We feel that much of the credit for our good results is due to the members of the Surgical Association, for they have been very liberal in supplying us with all necessary instruments and appliances.

FIG. 2.

FIG. 3.

Among the deformities of the lower limbs are frequently met bow-legs and knock-knee, and it has often appeared strange to me that authors should devote so much space in describing the latter condition and should dismiss the former with a mere passing reference. Genu varum is usually looked upon as being the reverse condition to genu valgum, although the angular appearance at the knee may not be so marked in the former as it is in the latter condition. In looking over the literature of genu valgum we find that great stress is

laid upon the fact that the knee-joint is a peculiarly constructed joint; and that is given as one of the causes of that deformity. We are reminded that when a healthy femur is held perpendicularly the internal condyle projects downward beyond the external to the extent of from one-half inch to one inch. The internal lateral ligament is often relaxed and the biceps muscle contracted in order to make the joint stiffer and more secure in walking. It is claimed that the knee, although it is the largest joint in the body, is also the weakest; the bones entering into its formation being so long make the joint liable to strains.

FIG. 4.

FIG. 5.

It has been ascertained that in genu valgum, not infrequently, even when the femur was in its normal position, viz., gradually slanting inward and downward from the hip-joint, the inner condyle becomes larger and altered in figure. If we accept this last named condition as the cause of genu valgum, and if it be admitted that the same constitutional cause operates to produce genu varum, then it will be seen that abnormal elongation and enlargement of the external condyle may be responsible for severe cases of bow-legs.

FIG. 6.

FIG. 7.

Case 1.—In the case here reported the last named condition was plainly discernible and was beyond doubt the cause of the deformity (Fig. 2). Such being the case the most effectual way of relieving the deformed condition was to resort to section of the lower portion of the femur at McEwen's line. Using as usual in such cases the periosteum elevator devised some years ago (Fig. 1), that membrane was raised from the bone at the seat of operation, and by means of an Adams saw the femur was divided. The small puncture in the skin was sealed with collodion and the limbs put up in plaster of Paris. At the end of the fourth week the dressings were removed and the limbs were found to be in the condition shown in Fig. 3.

There still remained in this case, after the condition of bow-legs was removed, the condition of genu recurvatum, which caused the

FIG. 8.

FIG. 9.

child to walk in an awkward manner. We have been unable up to the present time to persuade the friends of this orphan girl to have anything further done for the relief of her deformity. Besides being of interest in a clinical point of view, this case in a pathological sense illustrates one of those rare instances where elongation of the external condyle of the femur is the cause of the deformity. Dr. Poore in his work on osteotomy states that he met with one case where this deformity was due to lengthening of the external condyle. Mr. Keenes, in the Transactions of the Clinical Society of London, reports one case where the trouble was due to hypertrophy of the external condyle.

FIG. 10.

FIG. 11.

Case 2.—Figs. 4 and 5 show a well marked case of genu valgum, with an accompanying anterior curve of the tibia. In this case the distorted condition of the bones could be traced to early rickets. This child had been afflicted with well marked symptoms of that disease, and in her case, besides enlargement about some of the superficial joints, she was left with distinct elongation of the internal condyle of the femur, which caused the condition of knock-knee. As I

did not feel that cutting the biceps and external lateral ligament of the knee would do any good, I proceeded to divide the lower end of the femur a little above the epiphyseal line, subperiosteally. For section of the femur an Adams saw was used, as I prefer that to a chisel and hammer. To remove the curve of the tibia an incision was made over the point of greatest curve, the periosteum was opened, and a triangular piece of bone was removed from each tibia, when the legs were easily straightened (Figs. 6 and 7). Four osteotomies were performed in this case at one sitting, yet the child, who was six years of age, did not suffer from shock and made a good and rapid recovery, as will be seen from the following notes: Operation was performed on November 5, 1898, and plaster-of-Paris bandages were applied. On the 26th of the same month the bandages were removed, when the bones were found firmly united. The child was allowed to commence walking on December 3, 1898.

FIG. 12.

FIG. 13.

Case 3. — Although genu valgum can generally be traced to the rickety diathesis, we sometimes meet with that condition where we can find no history of rickets and no other sign of that diathesis except the deformity of the knee. I believe it is possible for some cases to have their origin from a relaxation of the internal lateral ligament, and when that ligament has been stretched to its utmost section of the lower end of the femur is correct treatment, and the limb can be brought around and maintained in the corrected position. Such was the procedure adopted in this case, and after the bone had firmly united the child was allowed to walk without any artificial support. (See Figs. 8 and 9.)

FIG. 14.

FIG. 15.

Case 4.—Webbed Fingers.—The connecting band in this deformity may be by skin and fibrous tissue; another variety where muscular tissue may be added to the above; and still another where the bones are fused for a part of and sometimes for their entire length. Where the latter condition exists the case is not a promising one for operation. In the others operations generally offer good chances for improvement.

FIG. 16.

The patient whose case is here reported was eleven years of age. Fig. 10 shows the extent of the deformity. On account of the thickness of the web Didot's operation seemed to offer the best chance for a cure. This consists in taking a flap from the palmar surface of one finger and one from the dorsal aspect of the other. The flaps are then brought over; that from the dorsum of one finger covers the raw surface on the plantar surface of the other finger, and that from the plantar surface covers the dorsum of the other. When the web is thin I have in many of my cases been in the habit of dissecting a triangular piece of skin whose base corresponds to the metacarpophalangeal joint, and whose apex reaches forward for about two-thirds the length of the first phalanx. After cutting the web with scissors for its whole length, this triangular piece of skin is brought down to the palmar surface of the hand and stitched at a point corresponding to the natural web of the finger. This piece of skin prevents the raw surface from granulating

FIG. 17.

too far forward. When the fingers are kept apart the wound readily granulates and the fingers as a rule are left in a very shapely form.

In the case under consideration the second and third phalanges of the ring finger of the left hand were fused, and in the right hand the first and second phalanges of the middle finger.

Fig. 18.

Case 5.—F. K——, aged ten years. Without any apparent cause his left foot began to turn in when he was five years of age; his gait became at the same time decidedly awkward. His heel became more and more elevated, until the equinus deformity of the foot became more marked than the varus (Fig. 12). He was admitted January 24, 1898, and on the 27th of same month he was subjected to operation, which consisted first in severing the tendo Achillis and posterior ligament of the ankle-joint, which permitted his heel to be brought down. The open operation was performed to open up the mediotarsal joint and permit the anterior part of the foot to be brought around. On April 2, 1898, he was discharged from the hospital, having made a good recovery (Fig. 13).

His friends were so much pleased at his appearance and felt so grateful towards the hospital for the good care he received while an inmate there that the order of the Maccabees, to whom his parents and friends belonged, immediately took steps to endow a bed in the institution and placed it at the disposal of the poor of their order whose children might at any time be in need of medical or surgical care.

Fig. 19.

Case 6.—As will be seen (Fig. 14), this child presented a severe case of clubfoot. It being a case of the congenital variety, there was considerable callus on the foot and the muscles of the leg pre-

sented considerable atrophy. The case was so severe, and presented such a well marked prominence on the dorsum of the foot near the ankle, that many would have advised excision of the astragalus, but I have never found that procedure necessary in my cases. I prefer to open up the mediotarsal articulation by the open operation and cutting all structures until I can with ease turn the inner part of the foot outwards. This boy entered the Children's Free Hospital on the 4th day of June, 1898, and was operated upon two days later. He was discharged September 9, 1898 (Fig. 15). No apparatus of any kind was used after the operation, and he was allowed to return to his home at Au Sable, Mich., wearing an ordinary shoe, and has been doing well ever since. Under the influence of massage, baths, and electricity the muscles are being gradually developed.

FIG. 20.

Children suffering from deformities are always objects of pity, but certainly none more so than those afflicted with facial defects. In no class of cases will the successful surgeon receive more gratitude from his patients, or feel such inward satisfaction himself at the thought of having removed a load of mental anguish from distressed parents.

Case 7.—It has been my pleasure lately to operate successfully upon several cases of harelip, three of which are here reported, and others complicated with cleft palate are still under treatment. In the first case there was no cleft palate, but cleft in alveolar border of superior maxillary bone, opposite the cleft in the lip (Fig. 16). I did not consider the defect in the bone of sufficient importance to warrant interference. The fissure of the lip was closed by Collis' method,

FIG. 21.

which consists in splitting the lip on one side, then taking a small flap from the opposite side and planting it in the split lip. Sutures of catgut were used, and no dressing of any kind was applied at the seat of operation. At the end of ten days the parts were firmly united (Fig. 17).

Case 8.—The next case proved more troublesome. The operation was done in a manner similar to that pursued in the above case, and although there did not seem to be any reason for apprehending anything but a speedy recovery, at the end of the third or fourth day suppuration appeared; the wound and almost the whole upper lip became covered with a thick incrustation, and all the stitches sloughed out and left a condition of things worse than the original fissure (Fig. 18).

After the wound had granulated completely, the second operation was done in the same manner as the first. The little flap which was still dependent from the angle of the lip was freshened and implanted in an incision on the opposite side. As there was a great deal of flattening of the nostril on the side, I inserted a button suture. One button was so placed that it made pressure on the ala of the nostril, and the suture was passed through the whole thickness of the lip and emerged a little beyond the line of union between the two segments of the lip. This suture was left in for four days only; if left in for a longer time too much puckering of the lip may be the result. The result of this operation is seen in Fig. 19.

Case 9.—The next case is still another presenting much depression of the lip on the side (Fig. 20). As in the other cases the lip and depressed nostril were thoroughly loosened from the bone previous to forming a flap on one side of the cleft and splitting the lip on the other (Collis), which procedure has the advantage of leaving an oblique cicatrix which shows much less than a vertical one; and besides, the vermilion border runs the whole length of the lip, which is not the case if the operation is fashioned to leave a vertical scar.

The button suture was used in this case to overcome the flattening of the nostril, in the same manner as in the former case (Fig. 21).

GREAT influence is being brought to bear upon the municipal authorities of Paris to induce them to sell the grounds and buildings now occupied by the hospitals of that city, and move these institutions outside the city walls, leaving nothing but emergency stations. The total value of the ground now occupied by the hospitals amounts to 166,000,000 francs. The most valuable piece of land is that of the Hôtel Dieu, 200 francs per square meter.

THE MEDICAL AGE.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

SERUM DIAGNOSIS IN TYPHOID.

That the exception proves the rule is as true of diagnosis by laboratory tests or clinical symptoms as it is of French verbs. That we should have reports of negative results in the serum reaction of typhoid fever should not be surprising. Widal himself has reported a case in which the typhoid bacillus could be obtained from the spleen, yet in which he could not obtain a serum reaction during any stage of the disease. Stadelmann and Cabot have each reported cases with autopsies in which the serum reaction was negative, and lately another undoubtedly negative case is reported by Schumacher. Many others have been reported, but these are not generally accepted, as the technique may have been faulty or the test was not applied often enough during the disease. The possibility that the case was not typhoid is also to be considered. Cabot has collected reports of a large number of investigators and places the average number of negatives at about two per cent.

It appears to be proved that a negative reaction may indicate conditions other than absence of typhoid fever. The reaction fails in about four per cent of cases to manifest itself until late in the disease (second week); the reaction sometimes is positive early in the disease, and is then negative during the remainder of the disease; it also happens that the reaction intermits, after showing positively it will be negative for a day or two. This shows that repeated examinations are necessary. Regarding the agglutination by blood from other than a typhoid patient, such is very liable to occur if the technique employed is faulty. Cultures may be too old; dilution and time limit may not be taken into consideration. Cabot is of opinion that inasmuch as no two observers find these pseudoreactions in the same diseases, they must all be due not to conditions existing in the blood, but

in the technique of the individul experimentalist. Generally speaking, a positive reaction always means typhoid infection past or present, provided the test is properly performed.

Serum diagnosis is undoubtedly of great value in differential diagnosis, or where another infection obscures the typhoid. That it has great value in epidemics is conclusively shown by Surgeon-General Sternberg's report to the American Medical Association, in which he states that malaria was found rare in our southern camps last summer after experts had been appointed to make scientific examinations of the blood and had revealed the fact that nearly all the sickness was typhoidal. Until serum diagnosis was generally employed the soldiers had been saturated with quinine and their cases called malaria. It is certain that scientific diagnosis, and especially serum diagnosis, achieved a triumph in the American camps during the late war.

EDITORIAL NOTES.

Compulsory Notification Again.

The question of compulsory notification of tuberculosis in Michigan has been brought to a climax by the arrest of a number of well known physicians on a charge of not complying with the law. It is questionable whether any infringement of the law has taken place, but even if it has, it is well that the breach has occurred in order to bring several questions before the public. The moral iniquity of creating a leper class out of the tuberculous is too grave a matter to be lightly condoned. The degradation of the physician's calling to that of an unpaid reporter for a bureau of statistics is one that he may justly resent. If dangerous communicable diseases are to be brought within public ken, let every alderman that has syphilis and every health commissioner that has gonorrhea voluntarily make examples of themselves for the public good. There may be some wise reason for a correct collection by the State of the statistics of tuberculosis. This is best furnished by the death-records. These statistics, however, should find some higher use than that of providing diversion for statisticians, nor should they be used as a means of projecting hazy generalizations based upon unreliable data, nor for the preparation of graphic curves of uncertain geometrical purport. Unless some undeniable good can come to the living from labeling the tuberculous as dangerous, this should be resisted as an unwarranted encroachment upon the liberties of the individual. The usual plea of the notificationists is that this is the only way to educate the public to a sense of the danger of the

disease. This, of course, is not so; but even if it were, to do an act of injustice to one individual sufferer that the rest of mankind may profit thereby must fall far short of any genuine ethical conception of public or private duty.

A Classification of Mental Diseases.

Students of mental disease will be interested in the system of classification propounded by Dr. Andrizen, based, as he considers, upon fundamental facts of evolution. There are five main groups of insanity, and the words used to designate them explain themselves: (1) aphrenia, arrests of cerebral development with absence or deficiency of evolution in personality; (2) oligophrenia, enfeeblement of cerebral development with a parallel enfeeblement in the evolution of personality; (3) paraphrenia, anomalies and perversions of cerebral development with corresponding evolution of personality; (4) phrenopathia, morbid conditions or derangements occurring in brains of nearly full development with previous apparent health, with corresponding morbid alterations of the personality; and (5) lipophrenia, terminal conditions of mental dissolution secondary to previous insanities. The insanities thus studied fall into five groups which assume serial arrangement.

Denaturalization.

The curious term "denaturalization" is applied in Great Britain to processes which render certain substances unfit for human consumption. Thus tea which was damaged could be admitted free of duty provided it were "denatured" and rendered unfit for consumption by treatment with lime and asafetida. This tea is now used profitably for the manufacture of caffeine, and the drug so produced can be sold at a price which renders competition almost futile. Damaged and unclaimed tobacco is "denatured," and nicotine washes are made for killing vermin. Alcohol is also "denatured," and thus a cheap spirit is made which, though undrinkable, is exceedingly useful for commercial purposes in numerous arts and industries. Denaturalization appears to be a profitable application of the "waste not, want not" principle.

ITEMS AND NOTES.

On June 13 the death of Lawson Tait, of Birmingham, England, occurred.

A society for combating tuberculosis has been organized in Chicago.

Mr. Harry Walters has given $45,000 for free public baths in Baltimore.

The *Index Medicus* must again cease publication owing to the lack of support.

A gift of $12,500 has been made to Providence Hospital, Chicago, by Nathan Freer.

The Berlin Medical Club invites physicians passing through the city to honor it with a call.

The medical department of the University of Vienna will soon celebrate its 500th anniversary.

Of the 486 foreign matriculates in the medical schools of Paris, only one is from the United States.

An English army surgeon, Dr. Bowron, recently died in India at the advanced age of one hundred years.

The antivaccination congress which was to have been held in Berlin on June 18 has been postponed.

The professor of hygiene at Königsburg, Erwin V. Esmarch, has accepted a call to Göttingen in the same capacity.

Pure fresh milk is to be sold to the sick of Philadelphia at four cents a quart, and sterilized milk at one cent per bottle.

The International Congress of Gynecology and Obstetrics will convene in the city of Amsterdam, Holland, from August 8 to 12.

The plague is reported to be very severe in the East, and to be spreading at Alexandria. It is said to have appeared in Paris.

A short time ago a fire in the laboratory of the University of Maryland, Baltimore, damaged the building and apparatus seriously.

Professor Simon Newcomb, of the Johns Hopkins University, received the degree of Doctor of Law, Oxford University, England, recently.

Birmingham, England, will soon get her university, the money required having been nearly all promised. Mr. Carnegie gives $250,000.

The Russian Government has appropriated over a million and a half dollars for the improvement of the mineral springs and other resorts in the Caucasus.

A woman in Brooklyn recently took a 300-mile bicycle ride in twenty-nine hours. She has announced her intention to ride 400 miles in forty-eight hours.

About $200,000 has been raised out of the $500,000 for the statue of Sir Thomas Brown, author of "Religio Medici," etc., to be erected at Norwich, England, where he spent the most of his life.

The venerable Sir John Moore, of Edinburgh, died on the 14th of June last at the great age of ninety-one. He was the father of the Royal College of Physicians of Edinburgh, and took his M.D. in 1828.

There occurred recently, in the Quartier de Monceau (Paris), sixty-six cases of acute lead poisoning, the result of eating bread from a neighboring bakery. The baker had used for fuel wood that had been painted.

A short time ago an ex-broker of New York City filed a petition of bankruptcy with liabilities at $29,357 and no assets, except clothing worth $75. Among his debts were $1460 owed to twenty-eight doctors and $350 to three dentists.

At a recent meeting of the faculty of the School of Medicine of Paris, Dr. Armand Gautier, professor of chemistry, announced the successful employment of injections of solutions of sodium cacodylate in the treatment of tuberculosis.

The marriage of Dr. Alfred Stillé, ex-president of the American Medical Association, and emeritus professor of the University of Pennsylvania, to Miss Catherine A. Blakiston, of Chestertown, Maryland, occurred June 14. The groom is eighty-five and the bride fifty-eight.

Two societies have been incorporated in Baltimore recently—one to furnish medical and surgical attendance to its members, and the

other to maintain a hospital and transact an undertaking business. It is a sort of medical trust, and probably like the clubs against which English physicians have been fighting for so long.

Recently Dr. H. W. Hill, of the bacteriological laboratory of the Boston Health Department, made an examination of a large number of public telephones in that city. In a number of transmitters harmless microbes were found, and inoculation of guinea-pigs failed to reveal the presence of any pathogenic microorganisms.

The number of the adherents of cremation in Germany appears to be rapidly increasing. According to statistics recently published there are at present thirty-seven cremation societies in the German empire, with an aggregate membership of 37,600. At the beginning of last year there were only twenty such societies, with a membership of 12,000.

It is reported that Frank H. Cooper, a Chicago merchant, has announced his intention of building a great hospital in the little Holland town of Frise, in which he was born. It will be a retreat for the sick and helpless, and will cost in the neighborhood of $200,000. Mr. Cooper will leave for The Hague within a fortnight to complete arrangements for the erection of the hospital.

According to the *Medical Record*, a man died recently in Mount Vernon from hemoptysis caused by a blow on the chest. He was running over the railroad tracks, and had just crossed one track when he caught his right foot in the signal wires between the tracks, which are used to operate the block signals, and fell on his face. The outer rail struck his chest with such force that it ruptured a blood-vessel. He managed to reach his home, where he became unconscious and died in a few hours.

According to the *Journal of the American Medical Association*, a student of the University of Vermont is said to have instituted suit in the sum of $10,000 against one of the professors in that institution for injuries received from exposure of a fractured leg to the *x*-ray for the purpose of taking a photograph of the injured member. The writ declares that, as a result of the exposure, discoloration of the flesh occurred, with subsequent atrophy of the tissues. All told, ten skiagraphs had been taken.

An English inventor has devised a very ingenious artificial leg and foot intended for use in cases of amputation below the knee-joint. It is mainly composed of a hollow rubber chamber which is inflated in exactly the same way as is a bicycle tire. The skeleton of the foot is

of wood and contains within it a rubber-faced joint which permits of movements like those which take place at the ankle. A pair of rubber pneumatic pads surround the end of the amputated limb, so that no undue pressure is exerted on the tissue.

A FRENCH medical journal tells the following story: A young woman conceived an ardent passion for a youth, who in turn refused to marry her. She then charged him with forcible violation. A surgeon who examined her found the hymen ruptured and blood on her linen, but no sign of the violent encounter she alleged had occurred. Investigating somewhat further, he found in the vagina a hen's egg, which could only be removed after breaking the shell. If the egg had been fecundated and it had been allowed to take its course to maturity uninterrupted in the vagina, there is no telling what interesting questions in legal teratology would have arisen.

A CURIOUS event — the administration of chloroform in a public place—happened recently in Berlin. A woman in trying to jump from an electric tram-car running at full speed through the Friedrichstrasse fell, and her right foot was caught between the platform and a wheel. Police and firemen made long but fruitless attempts to extricate the woman, who screamed piteously. Medical help was then sought at the neighboring university, from which a surgeon and two assistants were sent. The surgeon decided to administer chloroform in order to facilitate the work of rescue, and did so in the busy thoroughfare and in the presence of a great crowd. The tram-car was raised with lifting-jacks, and when after more than an hour the woman was released from her terrible position with comparatively slight contusions, the surgeon was loudly applauded by the spectators.

THE British War Office has decided, says the *Philadelphia Medical Journal*, that soldiers proceeding to military stations abroad where enteric fever is rife shall be given the opportunity of the process of inoculation against the disease, which has been revived by Prof. A. E. Wright, the professor of pathology at the Netley Military Hospital. Professor Wright, as the result of some experiments, considers that such inoculations exercise a protective influence against the disease. Considering the terrible scourge which enteric fever is known to be to the young soldiers of all armies serving in hot climates, he will, undoubtedly, have rendered humanity great service if his views prove to be correct. At the present time many people consider the experiments too small in number and inconclusive in result to warrant very sanguine expectations being based upon them. Still, they have received official indorsement to the extent we have mentioned.

STUMPF, of Munich (*Philadelphia Medical Journal*), called attention in forcible language to the lamentable habit of the Muncheners of giving beer to their children. It is a frequent occurrence, he states, to see children of two years, or even one year, drinking out of the beer mugs of their parents. In the women of Munich the excessive consumption of beer leads, among other disorders, to a huge fat development in the breasts; thereby the function of the organs is impaired, and it becomes necessary to resort to artificial feeding, with all its disastrous consequences. From the figures given by Stumpf one can form an idea of the appalling capacity of the Bavarians. In a population of 5,818,544 the annual per capita consumption of beer is 243 liters, or over 250 quarts, representing an outlay of nearly $15 per annum, or, for the whole population, an expenditure of $84,834,122. And this only for a single article — beer!

THE *British Medical Journal*, quoting the *Times*, states that in a recent article a correspondent records gratifying improvement in the general condition of the Siamese kingdom. In Bangkok some attempt has been made at sanitation in deference to the persistent advice of English health officers; roads have been cut and trees planted; latrines have been put up and refuse collected; and improved hospital accommodation provided. But there is no water-supply, and in this great city of more than 400,000 inhabitants the people have to drink the polluted and often brackish river water. Thousands of lives are every year sacrificed to the Menam waters. There is a Belgian physician to the King of Siam, but the health officers are British. Progress, it is believed, would be more rapid but for two chief causes: (1) the multitude of advisers with which the king has surrounded himself, and (2) the masses of Asiatics who have been admitted to foreign protection.

ACCORDING to *The Lancet*, the Lenval Prize, which has been founded by Baron Leon de Lenval, of Nice, will be awarded at the International Otological Congress to be held in London from August 8 to 11, 1899. The regulations for its award are as follows: (1) In connection with the International Congresses of Otology the sum of 3000 francs has been given to found a prize bearing the name of "The Lenval Prize." (2) The interest of this sum, which has accumulated between one International Otological Congress and the next, shall be awarded to the author of the most marked advances in the practical treatment of affections of hearing during that time, or to the inventor of any new apparatus which is readily portable and improves considerably the hearing power of deaf persons. (3) The sum of 3000 francs will be deposited in a public bank in the name of the president

of the jury. (4) The International Otological Congress will elect a jury each time, consisting of seven members. The jury will pronounce its decision at the closing meeting of each congress. All persons desirous of competing for the prize are requested to communicate with Mr. Creswell Baber, honorary secretary-general, 46 Brunswick Square, Brighton, England, stating the facts on which their claim is based.

UNTIL recently the only evidence as to the state of medical knowledge in ancient Babylonia and Assyria was derived, says *The Lancet*, from the lists of ailments preserved in the so-called magical cuneiform tablets, which consist of conjurations against various diseases or injuries and the respective demons supposed to be responsible. Now, however, that the study of cuneiform writing has advanced and the number of texts published becomes much greater, documents are coming to light appertaining to medical matters. An American student, Dr. Christopher Johnston, has paid some attention to them, and from his researches the following notes are mainly derived: From Assurbannipal's library have come several letters from physicians, of which four or five are from one name, Arad-nana. One of these is a report to the king of his brother's health. A more interesting relic is a tablet regarding a person who seems to have been suffering from facial erysipelas, though it may have been a case of ophthalmia. The letter, omitting the customary address to royalty, is as follows: "All goes well in regard to that poor fellow whose eyes are diseased. I had applied a dressing covering his face. Yesterday towards evening, undoing the bandage which held it, I removed the dressing. There was pus upon it the size of the little finger-tip. All is well. Let the heart of my lord the king be of good cheer. Within seven or eight days he will be well." Another letter runs thus: "With regard to the patient who has a bleeding from the nose, yesterday there was much hæmorrhage. Those dressings are not scientifically applied. They are placed upon the alæ of the nose, oppress his breathing, and come off when there is hæmorrhage. Let them be placed within the nostrils, then the air will be kept away and the hæmorrhage restrained. If it is agreeable to my lord the king I will go to-morrow and give instructions; meantime let me know how he does." This is evidently an instance of a patient suffering from epistaxis. External compression had been tried and failed, whereas plugging the nares is recommended. The name of another Assyrian physician, Iquisa-Aplu, is known, because he was by royal command sent to minister to a famous general named Kudunu, who lay ill at Erech, and he was able to report that he had cured his patient.

NEW PUBLICATIONS.

INTERNATIONAL CLINICS.

The new volume of International Clinics contains the usual number of interesting and instructive lectures. Waserman, of Berlin, makes a very able plea for General Therapeutic Measures in the Cure of Diseases. Eulenburg contributes a suggestive article on the Present Treatment of Tabes. Fournier's article on Unsuspected Syphilis will be found well worth reading, as will also Parker's article on Hernia in Children. Skene's contribution on the subject of the Use of Electricity in Surgery indicates the present status of that branch of therapeutics. Frink writes a very good article upon the Menopause, and Kirstein's lécture on Autoscopy of the Larynx will enable readers to obtain some better notions regarding the value of that art. The volume is an interesting one and fully maintains the character of the series.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by Judson Daland, M.D (University of Pennsylvania), Philadelphia, etc. Volume I, Ninth Series, 1899. Philadelphia: J. B. Lippincott Company, 1899.

LABORATORY HANDBOOK IN BACTERIOLOGY.

The rapid progress which is daily being made in the elaboration of bacteriological methods has made necessary the production of a new edition of Dr. Novy's invaluable handbook. The pages of this manual reflect the enthusiasm and untiring industry of their author, who makes his readers feel the true value of bacteriology, not only as an essential feature of a medical course, but as an educational measure for training the mind and sharpening the faculty of observation. It is unquestionable that the work will take high rank as a bacteriological manual, and become exceedingly popular with students in their laboratory courses. The work is entirely up to date and seems lacking in no essential particular, being admirably printed and copiously illustrated.

Laboratory Work in Bacteriology. By Frederick G. Novy, Sc.D., M.D., etc. Second Edition, Revised and Enlarged, with Frontispiece and Seventy-six Illustrations. Ann Arbor: George Wahr, Publisher, 1899.

CYCLOPEDIA OF DISEASES OF CHILDREN.

This cyclopedia of American pediatrics has been a conspicuous agency in diffusing interest in pediatrics as a special department of medicine. The present volume is a continuation of the work started in 1886 by the lamented Keating. It contains in the neighborhood of one hundred articles upon a great variety of topics, each article being written by a recognized authority upon the subject. Among so many excellent contributions it would seem invidious to select any for special commendation. The readers who will be fortunate enough to acquire possession of this book will feel that they have in it a work which can be consulted with safety and satisfaction, in a vast number of conditions and circumstances.

Cyclopedia of the Diseases of Children, Medical and Surgical. The articles written especially for the work by American, British, and Canadian authors. Volume V, Supplement. Edited by William A. Edwards, M.D. Illustrated. Philadelphia: J. B. Lippincott Company.

THE PROGRESS OF MEDICAL SCIENCE.

MEDICINE.

The Tongue in Influenza.

M. d'Hotel (*Medical Press*, June 14, 1899) draws attention to a character of the tongue constituting a pathognomonic sign of that mysterious affection known as influenza. If the malady is observed during the first few hours of its invasion, the tongue may not present any abnormal feature, but the following day it is invariably covered with a white coating more or less thick towards the center. Later on, according as the affection is of a benign type or becomes complicated or prolonged, the lingual coating is seen to diminish from the point or on the contrary to remain. This label of influenza is in general the last sign to disappear, and it is not rare to observe three weeks after the début a remainder of a whitish triangle at the base of the tongue, indicating that the patient not only has been through the malady, but also that he is not yet absolutely free from the morbid condition, although the general state of his functions may appear regular—an imprudence on his part, a cold, might provoke bronchopneumonia, gastroenteritis, or some other complication. Another characteristic of this lingual deposit is to redden litmus paper when rubbed on it, and not only during the first days of the malady, but as long as there remains a trace of it on the tongue.

This acidity persists as long as there remains any trace of the fur, and is a natural indication of the treatment, which is that of frequently rinsing the mouth with an alkaline solution such as Vichy water, followed by the internal administration of the same. It is evident that influenza cannot be cured more than typhoid fever, but M. d'Hotel affirms that complications were much rarer where the alkaline treatment was used.

Malaria and Mosquitoes.

Major Ross, I. M. S., the recently appointed lecturer in the Liverpool School of Tropical Diseases, delivered an interesting illustrated lecture (*Lancet*, May 27, 1899) on the "Relations of the Malarial Parasite to the Mosquito" in the physiological theater of University College. The lecturer said that malaria is not so dramatic a disease as cholera; it does not kill so quickly, but it kills far more people. In India it kills about 5,000,000 people a year. It is also a politically important disease, because it checks the progress of civilization in

districts the richest in the world, killing more of the army than are killed by the enemy. Malaria has been found to be due to a parasite in the blood. Of this he is absolutely certain, having studied the subject for ten years in the tropics. The lecturer explained how a parasite gradually develops, destroying a corpuscle of the blood and leaving it a mere shell; when fully developed it scatters, and attacking other corpuscles, destroys and poisons them likewise. Even if not so numerous as to cause fever, they cause an indifferent condition of health. The treatment is quinine, but this does not help them very much. What they require to know is how malarial fever is produced. To do so they must find the parasite in external nature, and the problem has been solved by Dr. Patrick Manson. Besides these forms of malarial parasites which have been described, other forms are found. Describing how in watching a drop of blood drawn from a malarial patient there was seen in eleven minutes the remarkable effect of snake-like forms wriggling away and disappearing, Dr. Manson came to the conclusion that the life-history of the malarial parasite when it leaves the human being is carried on in the mosquito, and therefore that malarial fever is propagated by the mosquito. The lecturer described how in the tropics he followed out Dr. Manson's theory beyond the point where he left it. The mosquito, which is not an ephemeral insect but one which would live for months under favorable conditions, he found to be furnished in certain species with an internal process which develops the parasite and its poison, and lodges it in a poison gland opening into the creature's proboscis. The mosquito, in puncturing the skin, is thus the means of inoculating a human being with the malarial poison. It is hoped that this speecies of malarial mosquito might be exterminated in certain districts, and this he mentioned would be the subject of a future lecture.

The Urine and the Feces in the Dissemination of Typhoid Fever.

P. Horton Smith (*Lancet*, May 20, 1899) says that the conclusions which he is justified in arriving at with regard to the infectious character of the urine in typhoid fever are as follows: (1) It can no longer be doubted that typhoid bacilli occur in the urine of typhoid patients, probably in about twenty-five per cent of all cases. (2) For the most part, though present in such numbers as to be demonstrated bacteriologically with the greatest ease, they are not present in sufficient quantity to alter the naked-eye appearance of the urine. In a smaller proportion of cases, however—probably about five per cent of all typhoid cases—the urine is rendered turbid by their presence. They

are nearly always in pure culture. (3) They occur first late in the disease, rarely if ever before the third week, and may make their first appearance during convalescence. (4) They generally remain present for some considerable time, for some weeks or even months. (5) The character of the urine does not assist in diagnosing the condition (unless of course it be rendered turbid by the bacilli). It may contain no albumin, often contains but a trace, sometimes has a good deal, and sometimes has pus, all of which conditions occur quite apart from the presence of typhoid bacilli in the urine. (6) The prognosis of a case is not rendered more grave by the occurrence of this condition.

Finally, it may be well to contrast the infectious character of the feces with that possessed by the urine, for in many points the two are dissimilar. In the first place, it must be noticed that whereas the feces contain the typhoid bacilli in apparently every case, this does not obtain with the urine; probably, indeed, in not more than twenty-five per cent of all typhoid cases does the urine present this phenomenon. Secondly, typhoid stools are without doubt most dangerous early in the disease—within the first three weeks. The typhoid urine, however, only becomes dangerous towards the end. Thirdly, typhoid stools may contain considerable quantities of typhoid bacilli, but very rarely, if ever, do they contain such myriads as may be present in the urine.

Summer Complaint in Children.

Louis Fisher, in the *Medical Record* of June 17, 1899, says that this dreaded complaint is caused by malassimilation and improper feeding during the hot weather. The writer says that the most important part of the management of a case of summer complaint is the dietetic treatment. The first point to be borne in mind is to discontinue all kinds of food which were given at the time of the attack — as for example, if milk has been given, the same must be discontinued, and in its place a food more easily assimilated, such as barley-water, rice-water, and farina water. These are simple preparations, and are easily made by adding a tablespoonful of barley, rice, or farina to a pint of water, boiling the same, straining it, and warming it immediately before feeding. It should be given in the same quantities as the child has been in the habit of taking prior to this attack, but at longer intervals, thus allowing the stomach much more time for the digestion and absorption of a lighter article of food, and giving it a little more rest. During the interval, if the child is very thirsty, it is a good plan to give boiled water plain or boiled water to which the white of an egg and some salt are added; and if the child is old enough occasionally a

few drops of expressed juice of meat, made by broiling a steak over a fire and expressing the juice in a lemon squeezer or meat press. When the infant's normal condition is again restored and all diseased symptoms have passed away, then we can gradually return to nature's remedy—milk feeding.

The Action of Colored Light on Man.

Dr. Raffegean, of Paris (*Medical Press and Circular*, May 31, 1899), has published an interesting account of his treatment of nervous affections by colored light. In a room papered in red and with red glass windows he placed a maniac, who for a long time was somber, affected with taciturn delirium, and ate rarely of his own accord. Three hours after being placed in this room he visited him, and to his great surprise he found him smiling all over, and asked to be given something to eat.

Another patient took it into his head that the air was full of poison, and remained all day with his hands over his mouth to prevent the air from entering. He was placed in the red room, and the following day he seemed quite rational, asked for his breakfast, which he swallowed with avidity, and at the end of a few days he was able to be sent home. On the other hand, a maniac, very violent, and wearing the strait-jacket, was put into a room with blue glass windows, and in a few hours he became calm and gave no further trouble.

M. Lumiere, the well known dry-plate manufacturer at Lyons, was obliged to substitute green-colored glass in all the windows of his large room for the usual red, as the work-people sang all day, gesticulated, and the men made love to the women. Since the substitution they are quiet, do not speak a word, and seem less fatigued when they leave off work.

Chorea.

F. Warner (*Medical Record*, June 24, 1899) says that chorea in children is a disorder frequently met with in well-developed but ill-nourished brains under the stress of circumstances. The main facts concerning this form of brain disturbances are: (1) The association with rheumatism and heart disease. (2) Chorea occurs in well-developed, highly-evolved brains, and not at the youngest ages, and brain health may be recovered. (3) It is more frequent in girls than in boys. (4) Almost all subjects of chorea are under the normal weight for their age; the body weight continues to fall for a time, but continues to rise before the movements subside, and they usually cease soon after the body weight becomes normal. (5) The condition is

characterized by weakened force of the nerve centers on muscles and by spontaneous action. (6) The movements seen are seldom coordinated by impressions from without, but combination of movements are normal. Can any explanation be given why a well-developed child's brain, when ill-nourished, should under the stress of environment fall into a condition of disorder in the nerve centers, resulting in their becoming weak in motor action and liable to constant spontaneous discharge of force? Such appears to be the problem.

The Spread of Tuberculosis.

At the recent meeting of the International Congress on Tuberculosis at Berlin (*Lancet*, June 3, 1899) Dr. Kohler, director of the Imperial Health Office, read the first paper. Taking as his subject the spread of tuberculosis, he said that notwithstanding the incompleteness of the statistics, the increase of tuberculosis throughout the world was unquestionable. Tuberculosis occurred in every country. Of the European States, Great Britain, Belgium, and Italy were the least affected, whilst Hungary, Austria, and Russia were the most heavily visited by the disease. In Germany the average mortality was 2.25 per 1000 of the population. The influence of altitude and of meteorological conditions was not yet precisely ascertained. The male sex was more liable than the female. The greatest number of deaths occurred between twenty and thirty years of age. From 1894 to 1897 87,600 persons died annually from tuberculosis in the age-period from fifteen to sixty years. It was thus the duty of society to combat tuberculosis as energetically as possible, and that not only by destroying the bacillus but also by strengthening the resisting power of the human organism.

Night Terrors, Symptomatic and Idiopathic, with Associated Disorders in Children.

Leonard Guthrie (*Clinical Journal*, June 7, 1899) in a very able article on this subject says that night terrors in children are always to be regarded as evidence of ill health, and that they may for convenience be divided into those of symptomatic and idiopathic origin. But *per se* the symptoms of the two cannot be distinguished.

Hallucinations of vision are usually due to febrile disturbance. The content of the dream may, in some cases, throw light on its cause, and the character of the dreamer is of more importance than the dream. In simple cases, simple treatment based on the cause suffices. In idiopathic cases, not only local causes of irritation, but the environment and nature of the patient, have to be considered.

Miliary Tuberculosis of the Pleura Without Other Tuberculous Involvement of the Lung.

Eugene Hodenpyl, in the *Medical Record* of June 24, 1899, in an article upon this subject, concludes: (1) That miliary tuberculosis of the pleura without other tuberculous manifestations of the lungs is of frequent occurrence; (2) miliary tubercles of the pleura may, apparently, assume unusual significance either in causing in susceptible individuals, or under otherwise favorable conditions, a generalized tuberculous exudative pleurisy, or, by complicating through concurrent infection, an acute exudative pleurisy of independent origin; (3) miliary tubercles in this situation are prone to become fibrous.

SURGERY.

Deaths from Lightning Strokes.

H. Whichello (*Lancet*, June 3, 1899) reports the cases of two brothers, aged respectively twenty-eight and twenty-two years, who were driving together in a dog-cart during a thunder-storm. They were apparently struck by lightning and seem to have fallen simultaneously out of the back of the vehicle, for they were found about five minutes after the flash lying side by side on the road, with the seat of the dog-cart under their legs and the driving apron over them. When Dr. Whichello arrived they were quite dead; the bodies were lying in the road in the same position as they were found. The elder brother had no external sign of injury. The younger brother presented the following appearances: The epidermis was burnt over the chest and abdomen from the neck to the pubes, not continuously, but in a number of circular holes from one-sixteenth of an inch to a quarter of an inch in diameter. The metallic collar stud was fused, and the skin beneath was deeply burnt. An odor of burnt flesh pervaded the whole width of the road. The back from the neck to the buttocks was burnt, but less severely than in front. The vest and shirt were charred, but the waistcoat and coat were uninjured. The woolen drawers and trousers had a hole burnt in them about two inches in diameter, corresponding to a burn on the right buttock. On the occiput there was a contused scalp wound, evidently due to the fall from the vehicle. There were no other injuries, nor were any of the clothes torn off either of the bodies. Neither urine nor feces had been voided. There was still no *rigor mortis* an hour and a half after death. His watch was going and seems not to have been magnetized, as it has kept good time since. The cloth of the cushion on which the younger brother sat

was burnt on its outer surface, but the wooden seat beneath was uninjured. The tail-board of the dog-cart has the paint slightly singed immediately behind the younger brother's seat; otherwise the vehicle bears no traces of the lightning. It was very wet from the rain. No one else was in the cart besides the two brothers. The horse was uninjured and trotted home of its own accord. The road also bore no traces of the lightning.

Two Rare Surgical Cases.

Two very rare cases were recently shown (*Lancet*, June 3, 1899) to the Berlin Surgical Society by Professor Hahn. A man admitted into the Friedrichshain Hospital with severe pain in the stomach and abdomen, vomiting, and constipation, was found on palpation to have a large abnormal structure occupying his right abdominal region. Laparotomy was performed, as the case was believed to be one of ileus caused by malignant tumors. When the abdomen was opened a condition of its contents was found which none of the surgeons had ever seen, for the serous membrane of the intestines was covered with an enormous mass of blisters of different sizes, varying from that of a pea to that of an apple. The pathologist to the hospital was therefore sent for, who declared the case to be one of "pneumatosis cystoides intestinorum," a condition known to occur in pigs, but as far as he was aware, never before observed in human beings. The blisters were for the most part destroyed by compression, bursting with a loud report. The wound was then closed and the patient very soon recovered. Photographs of the intestines taken during the operation were shown to the society. Professor Hansemann expressed the opinion that the disease might be due to bacteria, although no microorganisms were discovered.

Another interesting case was that of a man who had been run over by a carriage and suffered from a severe crush of the chest, fractures of several ribs, and dyspnea, which increased very rapidly. There was dulness on percussion over the left side of the chest, and hemathothorax was therefore supposed to be present. A puncture yielded, instead of blood, a milky fluid, which on microscopical examination appeared to be lymph. In order to relieve the patient tapping had to be repeated fourteen times during the next few weeks, and twenty-six liters (45½ pints) of lymph was discharged. The patient died on the twenty-sixth day after the injury. It appeared from the necropsy that the eighth and ninth ribs and the tenth dorsal vertebra were fractured, and an injury to the thoracic duct had permitted the escape of chyle into the pleural cavity. Cases of this kind are very rare.

A Simple Method of Reducing Shoulder Dislocations by Manipulation.

Miller (*Scottish Medical and Surgical Journal*, May, 1899) commends, as almost invariably successful, a simple method of manipulation for subcoracoid dislocation. The patient is seated, the arm grasped at the wrist and above the elbow, and flexed to a right angle at the elbow. An assistant stands at the other side of the patient and steadies the scapula with both hands. The arm is then carried carefully outward and upward with outward traction until it is at right angles with the body. This procedure is designed to relax the supraspinatus and deltoid, to unlock the neck of the humerus from the deltoid edge, and to bring the humeral head in close apposition to the glenoid cavity. As soon as the muscles are felt to relax, an internal rotation of the humerus, produced by dropping the hand, will cause the articular head to glide into place. The additional aid of an anesthetic, of free circumduction to enlarge the rent in the capsule, or of pressure by the thumb and fingers in the axilla, upon the head of the humerus, may be required. While these procedures have been successfully employed by many surgeons in combination with other methods, the author claims to have systematized them upon a scientific basis.

Phosphorus Necrosis.

Recently before the Berlin Surgical Congress (*Lancet*, May 27, 1899) Dr. von Stubenrauch, of Munich, said that in experiments made for the purpose of elucidating the action of phosphorus on the bones he trephined the mandibles in dogs and guinea-pigs and injected phosphorus through the alveolus, but necrosis did not ensue. He then exposed the animals to vapors saturated with phosphorus and obtained the same negative result. In order to imitate as much as possible the conditions which the work-people encounter in match factories, the animals were sent to a match factory to be left for a certain time in the drying-room, which is the most unhealthy department. Although the periosteum had been previously removed from the mandibles, no necrosis took place. Dr. von Stubenrauch therefore concluded that the typical necrosis of workers in match factories is not caused by the vapors alone, but that a specific predisposition must also exist.

Treatment of Syphilis.

Dudley Tait (*Journal of the American Medical Association*, June 17, 1899) recommends the use of the intravenous injections of mercury. This method, says the writer, should be regarded as an excep-

tional measure, of infinite value in cases where other recognized methods have failed—glossitis, phagedenism—and in cases demanding rapid action, or early intense mercurialization—malignancy. It should be reserved for lesions of exceptional severity: phagedenic chancre, primarily malignant syphilis, tertiary of the eye, brain, cord, nerves, and tongue. In the majority of these cases the patient will have already been submitted to some form of specific medication, but the disease has, nevertheless, continued its ravages. In the differential diagnosis of certain neoplasms in suspected tertiary syphilis, or in the presence of the numerous pseudophenomena or grave symptoms, such as epileptiform coma, etc., of obscure origin, intravenous injections of mercury constitute the only thorough test, of infinitely greater value than the iodines. The rapid and positive action of these injections cannot be disputed, but for obvious reasons this mode of treatment must be followed or supplemented by some simpler and more practical method as soon as the special indications have been fulfilled.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Recent Research on the Gonococcus.

In 1885 Podrez pointed out that acute gonorrhea varied considerably in the manner in which it subsided, and that this might be due in some way to the gonococcus. Gonococci are found both intra- and extra-cellular, but the latter position, it was thought, might be caused by irregularity in the mode of preparation. Drobny (*Archiv für Derm. und Syph.*, October, 1898; *British Medical Journal*, June 3, 1899), in order to test this, proceeds as follows: He discards the first drop of pus, and with a fresh drop smears carefully cleansed coverglasses, staining one by Gram's method and the other with Pick-Jacobsohns' solution. The latter consists of a solution of fifteen drops of Ziehl-Neillsen's carbol-fuchsin and eight drops of a saturated solution of alcoholic methylene blue in twenty cubic centimeters of distilled water. Specimens are placed in this for three or five seconds, washed, dried, and mounted in oil of bergamot or Canada balsam. By this method the protoplasm of the pus corpuscle is stained rose, the main substance blue, epithelium red, mucous cells and mucus violet. All microorganisms are blue except the gonococci, which are stained black or blue-black. By this means Drobny confirms the view that gonococci are often extra-cellular, and when so the course of the

urethritis is more severe and complicated than when they are within the cells. Out of seventy-seven cases, twenty-seven had complications, such as lymphangitis, balanitis, prostatitis, and rheumatism, and in all these cases free gonococci were found. Drobny insists: (1) that examination of the pus must be undertaken at the commencement of the disease; (2) that the course of the disease depends on the intra- or extra-cellular position of the gonococci. He thinks it possible that the extra-cellular position of the cocci may be due to paralysis of the leucocytes by toxins, thereby rendering them incapable of surrounding the cocci.

Beards and Bacilli.

According to the *British Medical Journal* the beard has lately fallen under suspicion of being the haunt of bacilli. It has been hinted that surgeons who wish to keep inviolate the aseptic faith should for conscience sake sacrifice what Parolles calls "valour's excrement." This is a counsel of perfection; but your devotee of asepsis is nothing if not perfect, and he would doubtless have himself shaved and even epilated to a completely glabrous condition, like the actor who blacked himself all over to play Othello, if he thought he could thus bring himself to the ideal degree of surgical purity. But the beard may, we are now told, be a means of conveying infection quite apart from surgical operation. Dr. Schoull, of Tunis, has long been so convinced of the dangers which lurk in the beards and mustaches of men suffering from tuberculosis, that he has made it a rule to insist on the thorough disinfection of these masculine adornments when the wearer will not consent to part with them. He has made experiments by inoculating material obtained from the hairs of the beard and mustache in guinea-pigs, and the results have convinced him that the danger to which he calls attention is a real one.

THERAPEUTICS.

Tribromophenol Bismuth in the Cuban Campaign.

Dr. Emilio Perez Noguera communicates to a Spanish medical journal (*Lancet*, June 3, 1899) an account of his successful treatment of wounds in the Cuban campaign by means of perchloride of mercury and tribromophenol bismuth or xeroform. This substance is a yellowish, tasteless, amorphous powder with only a slight odor, which has been recommended for internal use as an intestinal antiseptic. It is non-toxic, but has very highly bactericidal powers, as a two-per-cent addition of it to a culture medium will destroy the anthrax bacillus,

which a five-per-cent admixture of iodoform will not do. In gunshot wounds Dr. Noguera first employed prolonged irrigation with a perchloride of mercury solution of the strength of 1 in 1000. He then covered the orifices of entrance and exit with a thin layer of xeroform, the whole being enveloped in sublimate gauze and carbolized cotton-wool, this dressing being changed whenever signs of moisture could be detected coming through it. Under this treatment wounds healed in a most satisfactory manner without any pus, twenty or thirty days being the longest time required when the soft parts only had been injured. In the case of wounds inflicted by the cutlass the same irrigation was practiced, and the edges were brought together with sutures, xeroform being dusted over the surface and a dressing applied as in the case of gunshot wounds. All the cases treated in this way healed by first intention in from one to three weeks. In one case where it was impossible to bring the lips of the wound into apposition owing to there being a loss of substance, the wound granulated up from the bottom without the formation of pus, healing being complete by the end of a month. No toxic effects were observed in any of the cases, nor was there any tendency to form exuberant granulations. In order to see whether an absolutely dry treatment, such as could be applied on the field of battle, would succeed, Dr. Noguera selected three fresh cases of gunshot wounds without injury to any important organ, and instead of immediately irrigating them he simply swabbed them out as far as possible with cotton-wool, dusted them over with xeroform, and dressed them with gauze and cotton-wool. One of these was left for forty-eight hours, and the other two for three days, all being in an aseptic condition when opened. He also found that when a number of wounded were brought in close proximity xeroform dressings prevented any of them infecting others. Altogether he is strongly of opinion that this substance is very suitable for use in military surgery.

Cacodylate of Soda.

At a recent meeting of the Academy of Medicine of Paris (*Medical Press*, June 14, 1899) M. Gautier spoke at length on the properties of cacodylate of soda, which he employed as a substitute for mineral arsenic in anemia, intermittent fever, and in consumption, with considerable success. Cacodylic acid, he said, was rich in arsenical principles, since it contained fifty-four per cent of metallic arsenic; but the arsenic is in this product in an essentially latent organic form, which deprived it of all the physical, chemical, and physiological properties of the ordinary arsenical preparations. It was evident, indeed, that cacodylate of soda was not an ordinary arsenical composition, inasmuch as this salt reduces gradually but regularly the

fever of phthisis, as he has observed in three cases, at the same time stimulating assimilation and rapidly increasing the weight of the body. Further, the stomach supported indefinitely from two to four grains daily, whereas they all knew that many patients could not take even the smallest doses of mineral arsenic. However, in cases of pulmonary consumption he thought that the best method of administration of cacodylate of soda consisted in hypodermic injections; the dose should be from half a grain to one grain in the twenty-four hours during eight days, after which there should be a rest of a week, and then continued for another week. The attendant would be guided by the state of the appetite and the temperature; if the former declined and the thermometer went up, the injections should be recommenced.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Rheumatoid Arthritis of the Crico-arytenoid Articulation.

This case, a brief report of which follows, was detailed at length in the current number of Frankel's *Archiv f. Laryngologie und Rhinologie*, by Dr. A. Baurowicz, of Krakau.

A patient, without fever, had felt pain in the left side of the throat when swallowing for some five days. The voice was somewhat impaired. The left arytenoid, especially near its articular surface, was swollen and pale red in color, while the left vocal cord was immovable in the middle position. Sounding the region of the arytenoid caused pain. Hot inhalations of one-per-cent zinc sulphate solution and hot compresses were ordered, with an amelioration of the pain, but no change in the motility of the vocal cord. On the evening of the following day the patient had high fever, pain in various joints, especially in the left knee. The next morning there were numerous red spots on the skin, and in spite of the continuing fever, a profuse sweating. The swelling in the larynx had disappeared, but the immotility of the vocal cord remained. Under suitable antirheumatic treatment there was prompt amelioration of all the symptoms, motility of the left vocal cord beginning on the ninth day of the illness, though adduction of the cord continued difficult for several days. The case well represents a polyarthritis rheumatica in which the affection of the crico-arytenoid articulation appeared some time before other joints were affected. The fixation of this articulation was due not only to the periarticular swelling, but as well to the presence in the articulation of plastic exudate, showing how a possible ankylosis of the articulation may have its origin.

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ORIGINAL CONTRIBUTIONS.

TUBERCULAR OSTEOMYELITIS.*

BY ANGUS MCLEAN, M D , DETROIT, MICH.,

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In presenting this paper I have nothing especially new to offer, but I wish to urge the importance of an early diagnosis in tubercular affections of bone.

Osteotuberculosis is essentially a disease of childhood and young adult life, and, in fact, may begin *in utero*. Though any of the bones may be affected, the vertebræ and femur are the favorite bony structures for invasion. This disease is usually secondary to tubercular deposit in some of the soft tissues—in the lungs and lymphatic glands most frequently. We leave out of consideration here miliary tubercular myelitis, which accompanies a general miliary tuberculosis. However, primary invasion of the bone seems to be a well established condition, or, at least, tubercle bacilli have been demonstrated in the bone when they could not be found in any other tissue. Many authors maintain that the tubercle bacilli may enter the circulation through the air-passages or intestinal tract without any lesion of their lining membranes, while others still hold that there must be an atrium of infection, though undiscovered. The presence of the bacilli in the bone without evidence of a tuberculous lesion elsewhere may be explained further if we accept the doctrine of Baumgarten, who states that tubercle bacilli may be inherited and remain for an indefinite tine within the body in a latent condition. Besides, a certain vulnerability of the tissues of congenital origin must be recognized as a cause.

*Read before the Surgical Section, Michigan State Medical Society.

That localized tuberculosis sometimes follows a slight trauma is a recognized fact, while it does not often follow a severe trauma or a fracture. The reason for this seems to be that an extensive trauma produces free circulation and exudation and does not predispose to the deposit of the bacilli, while a slight trauma furnishes the necessary *locus minoris resistentiæ* for general establishment and proliferation of the bacilli. Hence these affections more often follow slight than extensive traumata.

The susceptibility of the young to this affection, and of certain bones more than others, has its cause in the structural growth. In the vertebræ primarily there are three centers of ossification, which grow rapidly until puberty, and it is before this time that the disease confines itself to the bodies of the vertebræ. Then the secondary centers make their appearance in the cartilaginous tips, and the transverse spinous processes. At about the seventeenth year the epiphysial disks of the bodies appear and do not become completely united until the twenty-fifth year. The disease confines itself to the bodies, and as a rule does not attack the arches until after puberty. There are four epiphyses involved in the growth of the femur, one forming the condyles and three forming the upper extremity; one each for the head, the greater and the lesser trochanter. Not only do we have these three epiphyses, but also an apophysis on the neck of the bone, which is an outgrowth of the shaft. It is in this particular that the femur differs from the other long bones. The ossification from these centers is complete about the twenty-first year.

As the tubercle bacilli usually select the epiphyses of the bone for their development because of the minuteness of the vessels in these parts and the constant cellular change, it only seems rational that they should prefer the vertebræ and the head of the femur, where several of such unions are going on at the same time. We would not expect a primary focus in the femur after the twenty-first year, for the metamorphosis by that time is complete, while we might expect such a focus in the vertebræ until the twenty-fifth year. The nearer the center of circulation the focus is located, the more rapid will be its growth. Those found in the shoulder or vertebræ are more rapid than those in the tibia and tarsal bones.

The general condition of the patient does not always give indications of bone tuberculosis. The disease may be present without any impairment of the general health. When situated in the extremities and uncomplicated, pain is usually the first symptom, and this is often referred to as being in the joint. It may be referred to some distant point, as in tuberculosis of the head of the femur pain is complained of at the knee. It is intermittent in character and more severe during

the night. Tenderness is not marked until the wall of the bone has begun to soften. If an area of tenderness can be detected around the epiphysial line and no pain on movement of the adjacent articulation, disease of the bone can always be suspected, and both extremities should be carefully examined. Swelling does not take place until the compact layer is perforated and the periosteum bulges. The involvement of the other tissue soon follows. Redness is not present until the affection extends toward the surface. Atrophy of the limb is an important symptom and takes place from a few weeks to a month or two after the beginning of an attack.

When the disease primarily attacks the vertebral column before puberty, it is usually confined to the bodies of the vertebræ. Frequently the first symptom detected is the attitude of the child and its attempts to refrain from vertebral motion. The disease being confined to the bodies, little or no pain can be detected by pressure over the arches, while on sudden or jarring motion the child complains of pain. In young adult life, when the disease has affected the arches, pain can be elicited on pressure.

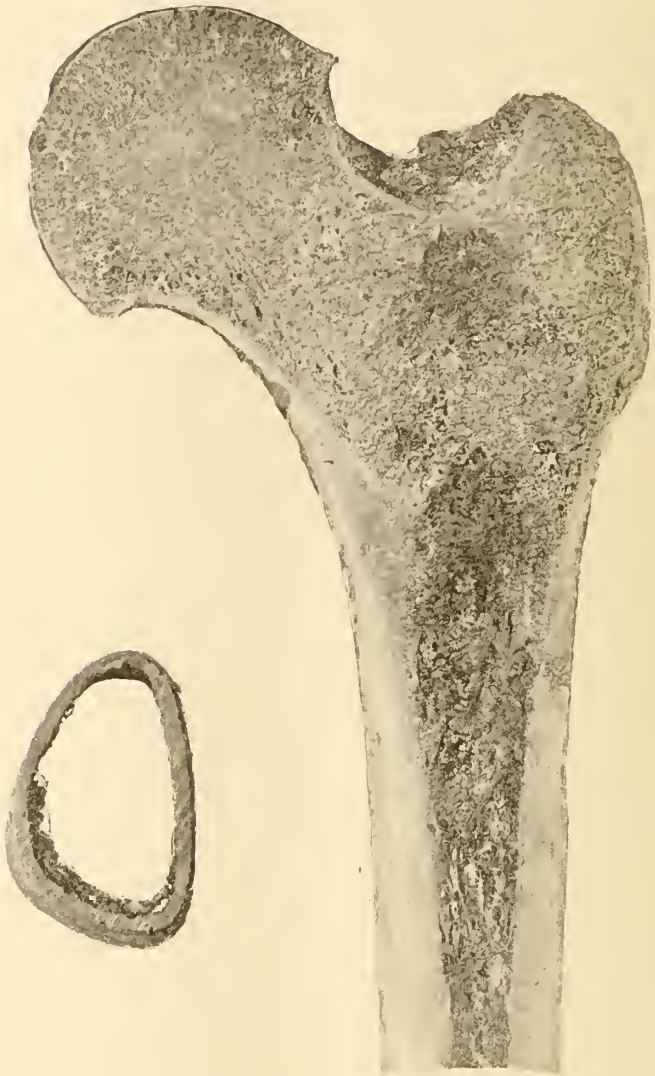
No definite line of symptoms can be set down, the only difference between a primary osteo and a primary synovial affection being the points of tenderness around the epiphysial margin. The disease attacks the lower extremities much oftener than it does the upper, and more frequently the epiphyses than the synovial membranes, in the propportion of three or four to one.

In some cases quite extensive inflammations may take place without producing any noticeable symptoms. The fever thermometer is frequently a great aid, for the slightest tubercular affection has its evening rise in temperature, although it may not be more than half a degree.

In all cases the family history should be carefully inquired into and a careful search made for lesions in any other parts of the body. In doubtful cases certain diagnostic measures should be resorted to in order to obtain a satisfactory diagnosis.

The exploratory or aspirating needle may be used, the bone having become softened by the disease so that its external layer may be perforated with little pressure, this of itself being of diagnostic value. If a focus is found, a portion of its contents can be removed and subjected to bacteriological examination.

Boechet has recommended *ignipuncture*, which is performed with a heated needle point of a Paquelin cautery, the needle penetrating the external tissues over the point of greatest tenderness. When the bone is reached, the needle is advanced by rotary movements so as to prevent its impaction. A focus can be detected by the sud-



den loss of resistance. The *ignipuncture* has a therapeutic as well as a diagnostic value.

The treatment is constitutional, mechanical, and operative, the last being of special benefit when the bones of the extremities are affected. There is little opportunity for operative interference when the bodies of the vertebræ are invaded, excepting that of aspirating or freeing an abscess cavity of its contents. To receive benefit from the constitu-

tional and mechanical treatment, an early diagnosis is of the greatest importance. It is much easier to prevent a spinal curvature or deformity than it is to relieve one after it has taken place. A plaster-of-Paris jacket, a brace, or splint applied so as to support the spine and keep it at rest, the administration of constitutional remedies, with good hygienic surroundings, persisted in for two or three years, will terminate many cases favorably.

Under this régime disintegration may be arrested and an osteosclerotic wall formed around the focus, which may remain latent or undergo calcareous degeneration. The same method is applicable to affections of the extremities, but they are more amenable to operative treatment. When the lesion is entirely removed and the wound closed, there need be no further anxiety of the adjacent articulation becoming invaded or of secondary infections of other tissues of the body.

The cuts were taken from sections of the lower portion of the shaft and upper extremity of a femur affected by diffuse osteomyelitis. At the time of the amputation the bone was a fine example of the four stages of tubercular degeneration as described by König—granulation, caseation, necrosis, and liquefaction. The cancellous tissue of the lower extremity was completely destroyed, the thinned compact layer forming the wall of an abscess cavity. In the upper extremity can be seen points of caseation and necrosis.

The patient from whom this was removed is a young lady about twenty years of age with a tubercular family history. Her right axillary glands became affected about three years ago. These were removed, and she afterward enjoyed good health until about fifteen months ago, when her knee began to pain her. She was informed of her trouble at that time and advised to submit to an operation. She would not consent to operative treatment at that period, and she was referred to me by Dr. P. C. McEwen with an affected and enlarged knee-joint, having been able to walk until that time.

It was thought that an excision of the knee-joint would be sufficient, but after exposing the bone this condition was found, and the only way of removing the diseased tissue entirely was by amputation at the hip-joint. She made a good recovery and is now quite well.

If this lesion had been removed a year ago, and the cavity treated by iodoformization or with bone chips, this young woman might still be in possession of a useful limb. Osteotuberculosis progresses slowly, and the date of its commencement cannot always be marked. But if its progression is unmolested death is about as certain as when we have a malignant growth, and its early diagnosis is almost as important as that of cancer.

MODERN MEDICAL TEXT-BOOKS.

BY C. C. MAPES, LOUISVILLE, KENTUCKY.

In the management of many of the diseases to which human flesh is heir, there has always existed more or less difference of opinion, both as to methods to be employed and remedies to be administered. In extenuation of such variation it must be remembered that all do not view conditions, pathological or otherwise, with the same optics; moreover, that medicine has not been reduced to an absolute science. Marked advances have characterized the last few decades, immortalizing many disciples of Æsculapius, yet fallacies, vagaries, absurdities, and superstitions of centuries ago—though persistently and aggressively assailed by earnest thinkers, practical observers, and original writers—are still manifest in the medical practice of all countries. Fallacious doctrines, however, are rapidly being supplanted by sound, rational therapeutic principles, based upon correct knowledge of anatomical, pathological, physiological, and therapeutical certainties.

To a higher standard of medical education, preceded by a more comprehensive knowledge of the academic branches, is due much of the improvement and advancement in therapeutic possibilities, surgical manipulations, and methods of scientific investigation. Some ancient writers on medicine and surgery, whose views were accepted as authentic for centuries, did not possess advanced medical education; thus a recent author speaks of Celsus, who has been, and is still, cited as an authority upon many questions of medical importance: "Though not a physician by profession, he was able to write and to think on medicine quite like a regular practitioner."

In the days of Celsus the facilities for advanced medical education and training must of necessity have been extremely crude and limited, yet medical history indicates even at that period students had the advantage of clinical teaching. Whether the term at that time carried the same significance and importance as at present I do not pretend to state, but I do claim that modern clinical instruction and clinical experience (*e.g.*, hospital and college clinical work) possess infinitely more value than the exclusive so-called text-book education. In the former we have actual, demonstrable, observable clinical facts, while in the latter we simply have a supposedly accurate record of statistics, and the observations and experiences of others, which may or may not be correct.

As to the accuracy of medical text-books: We appreciate the trend of medical statistics, both ancient and modern; we recognize that they will not stand the test of impartial investigation and unbiased criti-

cism; and, as modern text-books are based largely upon statistical information, their reliability is also open to serious question.

The multiplicity of so-called text-books is becoming actually bewildering. The physician is almost daily importuned by an energetic salesman for some equally energetic publishing concern to purchase "the largest, latest, most comprehensive text-book, or system of practice, on the market; one which embraces everything known in medical science; which gives the results of the most modern scientific research in every department; which is profusely illustrated from photographs and original drawings by the authors; which is absolutely indispensable and invaluable to every up-to-date practitioner of medicine; one which he cannot afford to be without; that orders have just been taken from Drs. Smith, Brown, and Jones, etc., etc.,— your order can be entered now and the book will be sent you, which can be remitted for when it suits your convenience," *ad nauseam.* The physician places an order (in self-defense); the book comes by express C. O. D. when he least expects it; when paid for and delivered he finds that the "latest work" is simply a miserable rehash of ancient literature, the only things new and fresh being the agent who took his order and the preface to the book; the majority of the illustrations even being "adapted" from the works of older authors.*

What need have we for additional text-books if they contain nothing new or original? We already have too many by amateurish, irresponsible, obscure, or unknown authors. It has been stated that "anybody can write a text-book," which seems more than half true, as many bear evidence of having been so written. There are some exceptions to this rule, as there are to most others, and good text-books, instead of having to be "pushed" by enterprising publishers and their representatives, are sought after by students and practitioners of medicine.

If the medical profession would pay less attention to unreliable statistical and text-book theories, and rely more upon actual knowledge acquired through intelligent observation and clinical experience, the acme of rational therapeutics would be more nearly approached. This statement, however, applies only to those whose capabilities entitle them to the distinction of reputable practitioners of medicine

* In reviewing one of the latest text-books (?) one of the leading medical journals states: "The somewhat pretentious title of this volume only tends to disappointment. The author holds it 'fills a gap in medical literature,' but it appears to be a case of 'robbing Peter to pay Paul.' The entire absence of a single new idea, a slovenly treatment of clinical features, the lack of any food for thought, and the element of uncertainty that pervades the volume, certainly do not commend it as a text-book. It is merely a slipshod gathering of new and old literature, some obsolete and some factitious, with an ineffectual attempt to weld the incongruities into a harmonious whole."

and surgery; those who possess the highest moral integrity and professional ability; those who have received the highest academic and scientific education attainable considering available facilities therefor; those whose intelligence and powers of reasoning, *a priori* and *a posteriori*, are acute, whose impressions are accurately recorded, whose judgment is calm, dispassionate, conservative, and whose conclusions are based upon results of careful and painstaking investigation.

The opinion of a single physician or surgeon of the present day who answers the above description should be worth more than all the ancient theoretical statistics in Christendom. Theory is all right so far as it goes, and medical authorities (so-called) must have something to write about, but more tangible evidence is demanded than the flimsy film of theoretical assumption upon which to base logical conclusions, when applied to medical practice or elsewhere.

At the risk of repetition I cannot refrain from stating that many of the "modern" text-books, by which the practice of medicine assumes to be governed, are largely reiterations of statements made by medical men and others hundreds of years ago; likewise "modern" illustrations are copied ("adapted") from those of decades past. In the face of these facts we dare to proclaim that the science of medicine has markedly advanced!

If the dozen or more modern medical text-books and systems of practice could be condensed into a few small volumes, if those volumes could be again condensed, eliminated, and purged of all padding, and impartially edited by capable, conscientious, up-to-date practitioners in the various departments (such as I have attempted to describe), we would then have a text-book of undoubted practical value, instead of what is now possessed—a mass of practically useless, unreliable statistics, ancient history, adapted illustrations, borrowed methods of therapeusis, etc.—text-books which contradict each other at every turn, all claiming to represent the latest practical views of renowned (?) authorities, which in truth, in some respects, represent little but stolen thunder, with a liberal amount of padding, thrown together without regard for either veracity, classification, or even regularity.

The author of a recent text-book on "Surgery" has the extreme audacity to introduce, as many others have done before him, a chapter on "Hydrophobia," reporting cases of the supposed malady, evidently manufactured for the occasion, without the slightest shadow of truth or fact. Moreover, I do not hesitate to assert that a close study of the modern aspects of the subject, and a retrospective survey of a history of the literature to 400 B. C., will furnish not the slightest tangible evidence that hydrophobia (*i.e.*, fear of water) is entitled to be classified in the category of surgical diseases, nor, in fact, that it

merits the distinction of being classified as a disease *sui generis*, the arguments of nearly every medical and surgical authority (?) in the universe to the contrary notwithstanding.

With especial reference to hydrophobia, so-called, the latest text-books extant are little more than reiterations of statements made by Democritus (B. C. 400), Dioscorides (B. C. 30), and others of the pre-Christian era—the vagaries and superstitions of the so-called fathers in medicine, carried down to the present time and palmed off upon the profession as facts, in what the authors claim are modern, up-to-date text-books.

A medical cyclopedia, published in 1845, is before me. I find about forty pages of very fine type devoted to a brief (?) history of hydrophobia, covering the period from Democritus (B. C. 400) to date of publication. Leaving out of consideration the question of Pasteurization, with which I do not care to meddle, the latest text-books (1896–7) contain practically nothing new, as can easily be seen by comparing the quotations, in abstract, which follow.

Other instances of the "newness" of modern medical text-books will not be discussed in the present contribution.

Published about 1800: "The causes of the hydrophobia are as follow: The bite of a rabid animal — wolves, foxes, cats, as well as dogs—imparts the disease. It has been said that blood must be drawn in order to produce it, but I have heard of a case in which by a severe contusion the teeth of the rabid animal, without the effusion of a single drop of red blood, excited the disease. Happily for mankind, it cannot be communicated by blood or saliva falling upon sound parts of the body; the flesh and milk of rabid animals have been eaten with perfect impunity. The dread of water has few distinct grades; it cannot be drunken; it cannot be touched; the sound of it pouring from one vessel to another, the sight of it, and even the naming of it, cannot be borne, without exciting convulsions.

"The symptoms are want of appetite, great heat, a dull, fierce, red, or watery eye, indisposition to motion, sleepiness, delirium, and madness. In the human the symptoms as recorded by Aurelian, Mead, Fothergill, Plummer, Arnold, Baumgarten, and Morgagni are chills, great heat, thirst, nausea, burning sensation in the stomach, vomiting, costiveness; a small, quick, tense, irregular, intermitting, natural, or slow pulse; a cool skin, great sensibility to cold air, partial cold and clammy sweats on the hands, or sweats accompanied with a warm skin diffused all over the body; difficulty of breathing, sighing, restlessness, hiccough, giddiness, headache, delirium, coma, false visions, dilatation of the pupils, dulness of sight, blindness, glandular swellings, heat of urine, priapism, palpitation of the heart, and convulsions.

"The saliva, when infectious, may have been so washed off by the animal's teeth passing through the patient's clothing as not to have entered the wound made in the flesh.

"The post-mortem appearances, according to Morgagni and Tauvry, are marks of inflammation in the throat, esophagus, trachea, brain, stomach, liver, and bowels; effusion of water, and congestions of blood in the brain; large quantities of dark-colored or black bile in the gall-bladder and stomach; mortifications in the bowels and bladder; livid spots on the surface of the body; and, above all, the arteries filled with fluid blood and the veins nearly empty.

"As soon as the disease discovers itself, whether by pain or inflammation in the wounded part, or by any of the symptoms formerly mentioned, the first remedy indicated is bloodletting. I shall say nothing of the many medicines which have been used to prevent the disease. No one of them has, I believe, done any more good than the boasted specifics which have been used to eradicate the gout, or to procure old age. I am not, however, so much encouraged as to advise it (thorough cleansing with soap and water, etc.), in preference to cutting out the wounded part. It (ablution) should only be resorted to when fears of a patient, or his distance from a surgeon, render it impossible to use the knife."

Published about 1820: "Hydrophobia is marked by unusual anxiety, timidity, and sighing, pain in the epigastric region, difficult and painful deglutition of all liquids, a sense of suffocation, dryness of the tongue and fauces, a small weak pulse, slight pyrexia, laborious respiration, intolerance of light and motion of the air, a discharge of viscid saliva from the mouth, and not infrequently by convulsions.

"The disease arises from introduction of poison by the bite of a rabid animal, commonly of the canine or cat kind. We have no proof that any of the secretions of a rabid animal but the saliva can excite hydrophobia. In animals seven or eight days is the shortest, and six or seven weeks the longest, period in which the disease shows itself after a bite. In the human a few days only have in some instances elapsed, but the most common time of the appearance of symptoms is from twenty to forty days after the bite. There are no well-authenticated instances of the poison lying dormant longer than eleven or twelve months.

"Rabies in dogs is attended with the following appearances: They generally show marked deviation from accustomed habits. In those which are domesticated some strange peculiarities have been observed, as picking up different objects—paper, thread, straw, etc., or anything which may happen to be presented to their notice. Sometimes they show a depraved appetite, and eat their own excrement, or lap their

own urine. In the progress of the disease the eyes sometimes become inflamed, a purulent discharge issues from the lids. Instead of barking, he often makes a dismal howl, and has a listless and melancholy appearance. He becomes extremely anxious and impatient, and has an inordinate desire to gnaw everything around him. When confined, he uses his utmost endeavors to break loose, and if he succeeds he wanders about seeking other animals to bite, particularly some of his own species. He laps water greedily, though often deprived of the power of swallowing it. He often has the appearance of being paralytic behind, and labors under an inflammation in his bowels, which occasions him to sit on his rump, seemingly in great pain. In the last stage all the preceding symptoms are highly aggravated; he now becomes very feeble, his jaws drop as if paralyzed, and the saliva runs from his mouth; he staggers about with scarcely the power of biting, and at length, being exhausted by disease, generally dies on the fourth or fifth day from its commencement.

"In the human species the general symptoms attendant upon the bite of a rabid animal are: The part bitten after some time begins to be painful; then come wandering pains, with an uneasiness and heaviness, disturbed sleep and frightful dreams, sighing, anxiety, and a love of solitude. These symptoms continuing to increase daily, the cicatrix of the wound becomes hard and elevated, a peculiar tingling sensation is felt in the part, and pains begin to shoot from the place which was wounded, all along up to the throat, with a straitness and sensation of choking, and a horror and dread at sight of water and other liquids, together with tremors. The person is capable of swallowing any solid substance with tolerable ease, but the moment fluid is brought in contact with his lips it occasions him to start back with much dread and horror, although he labors, perhaps, under great thirst at the time. Vomiting of bilious matter comes on, intense high fever ensues, attended with continual watching, great thirst, dryness and roughness of the tongue, hoarseness of the voice, and the discharge of a viscid saliva from the mouth. The patient is incapable of enduring light or the motion of the air, his respiration is laborious and uneasy; in some instances severe delirium arises and closes the tragic scene. But it more frequently happens that the pulse becomes tremulous and irregular, convulsions arise, and that nature, being at length exhausted, sinks under the pressure of misery.

"From symptoms which attend hydrophobia—heat, thirst, restlessness, fever, difficulty of breathing, priapism, watchfulness, and furor—from the inflammatory appearances usually observed on dissection, and from the successful employment of venesection in some supposed cases of rabies, this remedy has been used much by many practition-

ers. Our prognostic in this disease must always be unfavorable, as in most instances all means whatever have proved ineffectual. Death commonly takes place about the third or fourth day from the first appearance of the symptoms.

"The appearances observed in the human species on dissection in hydrophobia are: Unusual aridity of the viscera and other parts; marks of inflammation in the lower portion of the esophagus and cardiac extremity of the stomach, and even in the stomach itself. Some marks of inflammation are likewise observed in the brain, consisting in a serous affusion on its surface, or in a redness of the pia mater. Now and then we meet with an accumulation or effusion of blood in the lungs.

"As in rabies, when once manifested in the system, the power of medicine and all human skill have failed in most instances, our views should be early directed to prevent the accession of the disease; and for this purpose the most effectual is excision of the wounded part, with free ablution and scarifications."

Published in 1896: "Hydrophobia is an acute specific or infectious disease, as far as known never originating in man, but transmitted to him through the bite or by inoculation from the saliva of a rabid animal, usually the dog, although the wolf, cat, skunk, and even certain domestic poultry are capable of conveying the disease. The virus may be wiped off as the teeth of the animal pass through the clothing of the injured individual, consequently infection does not certainly follow such bites; but those upon exposed portions of the body are almost invariably followed by infection.

"The furious form is marked by frenzy and madness, the objective symptoms being pronounced and alarming. After the period of incubation, which varies considerably, animals show depression, uneasiness, and thus early their saliva is infectious. Their sense of hunger becomes perverted; they exhibit unusual tastes; secrete saliva abundantly, which becomes tenacious and frothy; exhibit a dry and edematous condition of the faucial mucous membrane; the bark is altered; they are infuriated at the sight of other dogs. In this stage there is usually insensibility to pain. Finally come paralysis of deglutition, quickened respiration, dilated pupils, and frenzy and madness of manner; they attack indiscriminately men and other animals. To this stage of furious excitation succeeds one of paralysis, and finally death follows from exhaustion. These manifestations usually last about a week.

"In dumb hydrophobia paralysis appears earlier and involves especially the lower jaw, the tongue falls out of the mouth, and the posterior extremities are quickly paralyzed. This form is much more quickly fatal than the other.

"The period of incubation in man is variable, ten weeks being perhaps the average. It is stated that it may be so long as a year or more, during which time the poison seems to lie latent. When the active symptoms supervene there is local discomfort about the wound —itching, heat, and peculiar unpleasant sensations. Nearly all cases are marked by mental depression and apathy, with complete loss of courage. Earlier symptoms are connected with respiration, which is infrequent; inspiration is halting; speech interfered with. The facial appearance is often one of anxiety, even despair. The muscles of deglutition are next involved in a combination of spasm and paralysis, and the act of swallowing is interfered with, sometimes made almost impossible. Although patients can swallow their own saliva, they find it most difficult to swallow any foreign substance, such as water, etc. As the case progresses the saliva becomes more tenacious and viscid, faucial irritation becomes more marked, the patient more restless, until later furious mania or muttering delirium is present, followed by prostration and paralytic phenomena, muscle tremor, etc., and death.

"Post-mortem changes are found within the nervous centers, most prominently in the medulla, then in the hemispheres, and then in the spinal cord. There is hyperemia with minute ecchymoses, with infiltration of the adventitia of the vessels, and peri-vascular extravasation.

"There is no authenticated case on record of recovery after medication by drugs. When it is known that injury has been produced by the bite of a rabid dog, local bleeding and suction of the wound, followed by complete cauterization or even extirpation of the injured area, would be advisable."

Published in 1897: "Hydrophobia is an acute infectious disease produced in man by the bite of an animal suffering from the disease, characterized by a long incubation, paroxysmal convulsions, great excitement, fever, and paralysis, terminating in death.

"Rabies is especially common in canine animals, though it occurs in cats, and may be transmitted to the herbivora. Symptoms in the dog are rise of temperature, followed by shyness, chilliness, irritable suspiciousness, a tendency to run from home, and a characteristically depraved appetite, which causes the animal to eat wood, stones, feces, and even its own tail. There is altered voice, often paralysis of the muscles of the jaw, with excessive salivation, causing frothy saliva to drop from the mouth, the attack ending in progressive paralysis and death. If the paralysis develops early, the rabies is spoken of as dumb rabies; if the excitement is pronounced, the case is one of furious rabies.

"There is no well-authenticated case of the communication of rabies from man to man. The virus is in many cases wiped off the

teeth of the biting dog by the clothing of the bitten person, hence bites upon uncovered parts of the body are especially fatal.

"The alterations of especial significance are venous injection and thrombosis, cellular infiltration of the adventitia of the veins, and miliary abscesses. These changes have been found in the medulla near the floor of the fourth ventricle. In addition, myocardial hemorrhages and esophageal edema.

"The incubation period is usually between two weeks and three months, rarely prolonged to a year, and even three years. Symptoms of the stage of excitement are usually stiffness of the throat and difficulty in swallowing, which rapidly increase until all efforts at deglutition produce violent spasm of the muscles of the pharynx, larynx, and upper chest. An intense hyperesthesia, affecting the special senses and general sensibility, now develops, with an increasing area of muscular involvement by the spasms. Paroxysms are produced not only by attempts at swallowing, but by the sight of fluids, especially running water, and finally by bright lights, loud sounds, or by irritation of the surface of the body. Although there is intense thirst, efforts at drinking are accompanied with excessive terror, and if persisted in produce violent tetanic spasms, which in rare cases have ended in death by cramp asphyxia. Excessive salivation is common. There is usually mild fever. At first the intellect is clear, but as the disease progresses delirium develops and may become violent. After from a few hours to ten days the paralytic stage appears, with increasing loss of power, which commonly commences in the muscles of the jaw and spreads to the whole body until it ends in paralytic asphyxia. The prognosis of developed rabies is fatal."

FOUR CASES OF TUBERCULOSIS TREATED WITH NUCLEIN.

BY S. H. WELLINGS, M.D., DETROIT, MICHIGAN.

It is evident from current medical literature, and from results of the recent meeting of the Tuberculosis Congress held in Berlin, that no specific cure for tuberculosis has been found. It appears certain that the profession will still have to be prepared to meet with many discouraging failures in the treatment of this dread disease with the remedies now at hand, until some specific is found. The labors of the profession have not been entirely barren of results, however, for many useful lessons have been learned concerning the management of consumptives, and several new and promising remedies, each having more or less reputation for utility, have recently been brought forward.

Conspicuous among new remedies recently recommended by well

known authors is nuclein solution. It is not my intention to discuss the comparative merits of the many new remedies enjoying more or less notoriety, but simply to give my personal experience in the treatment of four cases of tuberculosis with nuclein solution.

Case 1.—A girl aged seventeen, whose father died of pulmonary tuberculosis about two months previous to her first visit to my office. He was confined to his home for several weeks, and cared for by the family during his last illness. This girl was robust and healthy looking, and appeared to be free from any disease up to within two or three weeks prior to her father's death. The mother and three sisters are all healthy. At the time of her first visit the patient was coughing and raising sputum freely, and her weight was 98 pounds. The temperature ranged from 101° to 102°; night sweats were profuse and exhausting. Menstruation had ceased and was never again restored, while emaciation was extreme and progressed rapidly. The girl was troubled with distressing nausea and loss of appetite. Dulness was noted over the upper half of the right lung, and moist râles were heard over the balance of the pulmonary surface. Diarrhea and frequent paroxysms of abdominal pain complicated the condition. The microscope revealed an abundance of tubercle bacilli in the sputum. The prognosis was not promising in this case, and I so informed the mother. I commenced treatment May 5, 1897, by injecting in the arm ten minims of a five-per-cent nuclein solution. I gave an opiate to control the pain, and directed the patient to take as much exercise in the open air as possible. May 7, the temperature being 102°, I injected fifteen minims in the arm. On May 8 twenty minims was given; the opium was discontinued, it being no longer needed. May 10 I noticed a slight improvement, signalized by a drop in the temperature, the thermometer registering 101°. On May 12 my patient complained of having experienced a slight reaction after the last injection, and stated that she did not feel able to come to the office on the eleventh. After the subsequent injections I usually noticed a trifling febrile reaction of transient duration. From May 12 until June 28, inclusive, this patient was given an injection every other day; I increased the dose each time up to sixty minims, and then continued without further increase. The period from May 12 to June 1 witnessed an improvement in her general condition, the temperature dropping at one time as low as 100°. After June 1 she grew rapidly worse, until death finally ended her sufferings, July 15, 1897. I always sterilized with carbolic solution previous to inserting the needle, protected the puncture after each injection with iodoform collodion, and in no instance was there an abscess or any local trouble other than a slight transitory induration and redness.

Case 2.—This was a man twenty-three years of age, single, a common laborer, whose father and mother were living. One sister and an uncle died of pulmonary tuberculosis. This man took cold one year previous and was never well afterward. I first saw him at his home, where I found him in bed. His temperature was ranging from 102° to 103°; he had night sweats, with profuse and exhausting expectoration. He could take but little food owing to irritability of the stomach; he was unable to leave his bed, could not sleep well in consequence of excessive coughing, and was extremely emaciated. I discovered that there had been an extensive loss of lung tissue on the right side. I shall omit a detailed description of the daily treatment in this case. It seemed a hopeless undertaking from the beginning. The patient would not consent to the use of injections of nuclein solution. I therefore directed him to take it by the mouth, in teaspoonful doses, three times a day. He began to improve from the commencement of the treatment. In about two weeks he was able to walk about the yard and could take more food. He continued to improve for about six weeks, when he began to fail, and died in about five months from the time of beginning the treatment.

Case 3.—F. O——, a boy aged sixteen, a student, whose father and mother are living, but in poor health. The father has chronic nasopharyngeal catarrh. There were no other children in the family. An aunt on the father's side died of pulmonary tuberculosis. The boy was sent to me from his home, about 125 miles distant. At that time he complained of pain in the right side, over the lower lobe of the right lung. He was nauseated frequently and occasionally vomited after taking food. He coughed almost constantly, and raised thick yellow sputum. His weight was 97 pounds. The temperature registered 101° to 102°. On percussion I observed dulness over the lower lobe of the right lung. Auscultation revealed the presence of moist râles. The patient experienced dyspnea on taking exercise. He could sit up, but was able to take but little exercise without causing great fatigue. A bacteriological examination of the sputum revealed tubercle bacilli. I immediately began to use nuclein solution injections of twenty minims once daily, increasing the dose each day by easy stages. I had to abandon the injections after about two weeks, since the boy was so nervous and the injections caused so much excitement. I concluded it more prudent to adopt the oral method of medication, which resulted in a decided improvement from the beginning. He began to gain in weight, his temperature gradually diminished, and in three weeks his condition was so encouraging that I sent him home with a supply of nuclein solution five-per-cent, and gave him instructions to take one teaspoonful three times daily. He

sent me daily written reports, which testified to his steady and uninterrupted recovery. In three months his temperature continued nearly normal, and his weight had reached 120 pounds. He could easily walk ten or fifteen miles a day. It is now two years since I saw him, and the young man is pursuing his studies in college. He informs me his health is good and he has no trouble whatever. He continued the medicine about seven months.

Case 4.—Miss G. W——, aged twenty years, by occupation a saleslady in a dry goods store. Her mother is living and healthy, but her father died of some chronic lung trouble, probably tuberculosis. The patient's weight was 98 pounds, her temperature 102°, she had night sweats, and the catamenia had been suppressed for four months. She had a poor appetite, suffered with constipation, and complained of being tired all the time. On physical examination I found dulness over the apex of the right lung, but no cavities. Tubercle bacilli were profusely distributed throughout the sputum; the cough was distressing, often disturbing the sleep at night. The sputum was copious and streaked with blood; usually it was thick and purulent. Treatment began April 18, 1898, by taking teaspoonful doses of nuclein solution No. 2 (for oral use only) three times daily. This treatment was followed faithfully for about four months, interrupted only by a few short intervals, during which the medicine had to be omitted owing to its disturbing the stomach. Soon after beginning the treatment a general improvement was noticed. This patient is now occupied in her usual avocation; she eats well, has no cough, her menses have been restored, and she appears well. No examination for bacilli in this or the previous case since recovery.

The nuclein solution used in all these cases was the five per-cent solution prepared by Parke, Davis & Co., of Detroit. In the first three cases the solution for hypodermic use was employed, and in Case 4 the No. 2 solution, five-per-cent, was taken by the mouth only.

According to the *British Medical Journal*, as at present arranged the expedition of the Liverpool School of Tropical Medicine will leave for Sierra Leone early in August. The party will be headed by Major Ronald Ross, I.M.S., director of the school, who will probably be accompanied by Mr. H. E. Annett, the demonstrator, and possibly by some volunteers. The first point to which it is proposed to give attention is the identification of the mosquito which acts as host to the malarial parasite in Sierra Leone. When this has been accomplished the breeding-places and habits of the mosquito will be studied with a view of devising means for checking its multiplication.

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EDITORIAL ARTICLES.

SKIN DISEASE AND GENERAL HEALTH.

The harmony existing between all parts of the body physiological is apt to be ignored in days when specialism tends to direct attention exclusively to the local manifestations of disease in organs. The extent to which local disease reacts upon the whole economy and makes the general practitioner a necessity to the special practitioner is often admirably exemplified in estimating the effect of general health as a factor in the production of skin diseases. The advocates of the exclusively local character of skin disease justify themselves by the dictum of such a distinguished dermatologist as Kaposi "that both physiological histology and experiment have proved most cutaneous diseases to be purely local diseases which develop in the tissues of the skin, and which in a measure can be at any time produced at will in one who is in perfect health." This habit of prescribing simply for conditions that meet the eye is, however, one that has arisen out of conditions of haste which prohibit giving careful attention to the patient's general state of health. Kaposi's statement is one to which every general practitioner of wide experience will express dissent.

If consideration be given to those diseases in which internal treatment is said to be unnecessary, much can be found in which the treatment of general health becomes essential. The commonest disease, such as eczema, affords ample evidence that something more than merely local irritation enters into the etiology. The one factor which enables the skin to resist the irritation of occupation, which is so frequently a local cause of eczema, is general health. The treatment of warts, it might be thought, would coincide with Kaposi's view in being purely local. Warts, however, will last for years and resist all kinds of local treatment until the malassimilation and the constipation which

is so commonly present with them are treated. If obstinate cases of warts be treated with sulphate of magnesia and thyroid extract they often disappear without local treatment. The growth of hair out of place might be esteemed something which can only demand local treatment by electrolysis. Amenorrhea is often a cause of these hairs, and in married women incomplete coition leads to these hairs developing, and they only cease to recur on the cause being removed. Young widows develop hairs which disappear on remarriage. In some cases removal of the ovaries has alone prevented the continued growth of of these hairs.

Among the conditions of general health exercising a marked effect on skin diseases, overfatigue is perhaps an important factor. There is an overfatigue in pleasure just as there is in work, so that a complete cure of an eczema or a pruritus which for months has baffled all local treatment can often be cured by a few weeks' rest in bed. Worry is another cause which predisposes to skin disease, and often plays its part in producing the neurasthenia which results in alopecia areata. Uric acid also enters very largely into the predisposition to skin diseases. It is unnecessary, of course, to point out how essential is the treatment of this condition by internal means, just as the constitutional treatment of syphilis is a *sine qua non* in the treatment of the syphilides.

EDITORIAL NOTES.

Another Old-age Theory.

Professor Mechnikoff, of phagocytosis fame, has elaborated a theory of old age, based largely upon his fundamental conception of the nature of the leucocyte. He recognizes two kinds of cells, common and noble. The noble cells determine the functions of organs. The common cells are identical in all the organs; in fact, they simply become connective tissue cells. Mechnikoff calls the noble cells macrophagi and the common cells microphagi. Old age consists in the subjugation of the macrophagi by the microphagi. Mechnikoff hopes that some substance will be found to destroy the microphagi by artificial means and thus extend the life of the noble cells. Mechnikoff's theory that age is due to proliferating connective tissue cells is somewhat like that one which makes age the result of mineral deposits in the arteries; neither theory fails to tell us why these changes are not the result of age rather than age the result of them.

ITEMS AND NOTES.

London has vaccination teas.

The Thirteenth International Medical Congress will be held at Paris, from August 2 to 9, 1900.

The Canadian Medical Association will hold its annual meeting in Toronto, on August 30 and 31 and September 1.

A hospital has been held responsible and mulcted for allowing a hot-water bag to burn seriously the leg of a woman under an anesthetic.

Sir William MacCormac, of London, has been elected an honorary president of the Thirteenth International Congress of Medicine to be held in Paris August 2 to 9, 1900.

The *Gazzetta degli Ospedali e delle Cliniche* of May 16, 1899, announces the appointment of Miss Rina Monti to the chair of comparative anatomy in the University of Pavia.

The Brooklyn faith-healer whose treatment of a young Brooklyn child suffering from gangrene of the foot necessitated amputation has been sentenced to five years' imprisonment.

Dr. Henry Jones, a member of the Royal College of Surgeons, whose death was announced some time since, was better known to the public as "Cavendish," the authority on whist.

It is said by Legrain, a famous French alienist, that nine-tenths of all cases of insanity, and nine-tenths of all cases of criminality, are directly or indirectly dependent upon alcoholic intemperance.

According to a press telegram from Antwerp, Drs. Reurette and LeBro, of the Belgian Medical Academy, have discovered a serum which will cure cancer, and that experiments on twenty horses have proved its efficacy.

The hospitals in Munich are not provided with ambulances. This need is supplied by a society called "Sanitætswache, Rothes Kreuz," which has a number of ambulances and trained attendants stationed in different parts of the city.

Some of the New York City justices have announced that they will no longer accept physicians' certificates of sickness for unwilling jurors, but that in such cases the physicians will be called into court to testify concerning such illness.

ACCORDING to life insurance tables in England the mortality-rate from consumption, comparing the statistics for the period from 1851 to 1860 with those for the period 1890 to 1895, has declined for all ages together about forty per cent.

THE Thirteenth International Congress of Medicine will undoubtedly be the largest of the one hundred and more international congresses which are to be held under the patronage of the Paris Exposition of 1900. At the last session in Moscow there were over 5000 members; 7000 are expected in Paris.

THE French naval medical officer, Dr. Emily, who accompanied the Marchand scientific mission which made its way this year from the Congo to the Red Sea, has been dined and wined by the profession in France on his recent return. This is his third expedition to Darkest Africa, although he is not yet quite thirty-four years of age.

THE *Gazette Médicale de Paris* states that several physicians of Cologne and the Rhine countries have been arrested for selling pills to young men which produced symptoms simulating heart disease, and thus secured their exemption from military service. The death of one who had taken too many pills led to the discovery of the trick.

MLLE. EDWARDES PILLIET, M.D., is the first woman teacher of medicine in Paris. She has just been appointed by the Department de l'Assistance Publique of Paris an instructor in certain medical branches. She is to lecture on physiology to the nurses at the Hôpital Lariboisière, and to give instruction in bandaging to the attendants at La Salpêtrière.

A MONUMENT has just been erected in the surgical amphitheater of the University of Pisa in commemoration of the fact that it was there that, on September 26, 1868, ovariotomy was performed for the first time in Italy by Pasquale Landi. Dr. Landi, who was professor of clinical surgery at Pisa, was born in 1817, and died in 1895. He attended King Victor Emmanuel, and was the author of some sixty monographs on surgical subjects.

THE *Maryland Medical Journal* says that in some persons hunger will excite markedly disagreeable sensations in the teeth. A case is published of a gentleman who, while convalescing from typhoid fever, was seriously annoyed by painful sensations in two of his molars whenever he became hungry. The pain was sufficient to rouse him from sleep, and could not be allayed except by the introduction of food into the stomach, when instant relief followed.

According to Professor Loeffler, of Greifswald, congenital tuberculosis is extremely rare, and that in all such cases tuberculous disease of the mother's generative organs has been found. He does not believe that the tuberculosis of the father has any part in the hereditary transmission of the disease. And as far as immunity is concerned, there is no proof as yet of immunity to the disease, nor of congenital or hereditary disposition to it, but that there is great probability that other diseases of the respiratory or digestive organs, as well as disturbances of nutrition, favored tuberculous infection.

The official report of the Antirabic Institute of Turin states that the number of persons who applied for treatment during the year 1898 was 441. Of these 231 underwent a course of treatment by Pasteur's method; in the remaining 210 cases it was positively ascertained that the animal which inflicted the bite was not rabid. The mortality was *nil*. The total number of persons who have applied for treatment since the opening of the institute on September 30, 1886, is 5169; of these 3627 were actually treated. The total death-rate from 1886 to 1898 inclusive is given at 0.68 per cent.

The following anecdote is commended to the consideration of Professor Schenck and his enthusiastic followers: A clergyman, walking on the outskirts of his parish one day, found one of his parishioners whitewashing his cottage. Pleased at this novel manifestation of the virtue that is next to godliness, he complimented the man on his desire for neatness. With a mysterious air the worker descended from the ladder, and approaching the fence, said: "That's not exactly the reason why I'm a-doin' of this 'ere job, your worship. The last two couples as lived 'ere 'ad twins, so I says to my missus: 'I'll take and whitewash the place so as there mayn't be no infection.' You see, sir, as how we've got ten of 'em already."

According to the *Medical Press*, attention has been called by a French observer to the fact that persons with incipient tuberculosis not perceptible to ordinary auscultation often experience, when talking loudly, a sensation of local vibration over a given area of the thorax corresponding to a zone of partially solidified subjacent lung. In some the sensation amounts to positive discomfort, but more frequently it is not perceived by the patient until his attention has been directed thereto by the physician. The point is worth noting, though in all probability a degree of infiltration which would expose the patient to this sensation of localized vibration would be sufficient to attract attention at the hands of the examining physician by the ordinary methods of physical investigation.

A STATUE of Hippolyte Larrey was unveiled a few weeks ago in the court of the Hôpital de Val-de-Grace. The ceremony was conducted by General Zurlinden, military governor of Paris. In the same court stands a statue of the famous Baron Larrey, father of Hippolyte Larrey. Military medicine from the time of Napoleon I. up to the present day has centered in the Larreys. The father was attached to the army of Napoleon Bonaparte, and participated in every campaign up to and including the disaster at Waterloo. The mantle of the father fell upon the son, and with the army in Italy, to Solferino, in the hospital at Picpus, during the great cholera epidemic (1832), and lastly the campaign of 1870, this son continued the history begun by the father.

ACCORDING to the *Journal of the American Medical Association*, among the paintings at the Paris Salon this year two medical subjects have attracted considerable attention. One, "A Consultation at the Hospital Paschal," represents Dr. Brocq examining the back of a young woman who stands picturesquely draped before him, with a number of internes in their gowns and several visiting physicians, all portraits. No lesson is perceptible. "The Accident" shows the physician summoned to the circus rider on a couch in the flies, with the clowns and musicians crowding around her and keeping back the gaping public. Still another "Accident" is a scene of a workman being carried past on a litter, the passers-by removing their hats, except one stylishly dressed man, who is accosted by one of the workmen with the words which constitute the title of the painting: "Hats off! Salute Labor's Wounded!" The physician is seen mounting the hospital steps in the distance.

IN France, says *The Lancet*, animals found to be tuberculous are slaughtered under the official regulations and the carcasses are seized, an occurrence which has become much more common since tuberculin has been employed for the early diagnosis of tubercle in animals. The law of April 13, 1898, has provided for the payment of compensation to the owners of animals sacrificed in this way in the interests of public health. The compensation is on the following scale: (1) When the tuberculosis is very extensive, one-third of the animal's value at the time of slaughter; (2) when the disease is localized, three-fourths of this value; and (3) when the carcass of an animal slaughtered by official order is found to be free from tubercle, the full value of the animal as above. In all cases the price of the meat and offal sold by the owner, with the permission of the *maire*, is deducted from the compensation above mentioned. Compensation must not exceed $40 for one-third of the animal's value and $90 for three-fourths of its value.

M. Francois de Curel, says the *Medical Record*, has written a play, which was recently brought out in Paris, the hero of which is a physician who places pure science above human life, and experiments with the latter until he gets into a heap of trouble. He has discovered the virus of some mysterious disease which infallibly kills in twelve months. Seeking for a good subject upon whom to experiment with the virus, he lights upon one of his patients, a young and pious maiden who is far gone with tuberculosis. He inoculates her and sets going the train of symptoms which would result in death in a year if the phthisis was not certain to kill her sooner, and then discovers to his horror that she has been to Lourdes and got miraculously cured of her consumption. His wife learns of the experiment and leaves him, and he gets tired and takes a dose of the same virus, and begins to make preparations to die on the first anniversary of his wife's departure. Then he discovers an antitoxin and averts the death of his victim, his wife forgives him and comes back, and he concludes to live, and so takes some antitoxin himself. The play is called "La Nouvelle Idole," the new idol being experimental medicine, and is reported to have scored a success.

According to the *British Medical Journal* Prof. Gustavo Pisenti, of the Uuiversity of Perugia, has lately had a thrilling experience in extracting a cataract from a powerful lioness about three years old. The animal was placed in a suitable cage in the middle of the menagerie, and the first difficulty was the administration of an anesthetic. The intervals between the bars of the cage were filled up with cotton-wool, and a large packet of gauze impregnated with chloroform was placed in the cage, the door of which was then closed with a shutter. In about a quarter of an hour a reconnaissance was cautiously made, and the illustrious patient was seen lying stretched out, apparently in a condition of deep coma. She was then dragged out of the cage, bound and gagged. She was next placed on a table, but before the operation could be begun she suddenly awoke, and struggled violently, rolling on to the floor, where the medical men "with admirable coolness, but not without intense emotion, which might easily have been seen in their countenances," held her down while the animal's head was wrapped in a towel steeped in sulphuric ether. The lioness, however, managed to free herself from the gag and partly from her bonds, and gave a roar which made the majority of the spectators beat a hasty retreat. But the ether overcame her, and Professor Pisenti with great pluck dragged her into the cage again, where the anesthetic *coup de grâce* was given by means of another packet of gauze steeped in chloroform. The beast's head was pulled out through the door of the cage and securely held in position. Professor Pisenti then operated with brilliant success.

NEW PUBLICATIONS.

NEURASTHENIA.

This is a collection of lectures delivered by the author chiefly at the Welbeck Street Hospital for Diseases of the Nervous System (London, Eng.), and aims to be only "a record of personal experience."

Neurasthenia is so often thought and written of as almost distinctively an American disease that it is of interest to note that the clinical material of the London hospitals affords ample supply of neurasthenic cases to illustrate all phases of this multiform disease.

The symptomatology, mental and physical, the diagnosis, the pathology and forms of neurasthenia are interestingly discussed, and the author's large fund of clinical material is amply and aptly drawn upon in the illustration and emphasis of many points. The author happily emphasizes the fact that diseases of the nervous system present a much more hopeful field of work than is commonly thought.

To the neurological student the book will prove readable and helpful.

Clinical Lectures on Neurasthenia. By Thomas D. Savill, M.D., Physician to the West End Hospital for Diseases of the Nervous System, London; Examiner in Medicine in the University of Glasgow; Formerly Medical Superintendent of the Paddington Infirmary, and Assistant Physician to the West London Hospital, etc. Price, 5s. net. London: Henry J. Glaisher, 57 Wigmore St., Cavendish Square, W., 1899.

TWENTIETH CENTURY PRACTICE OF MEDICINE.

The sixteenth volume of the Twentieth Century Practice of Medicine contains several very important articles. Andrew H. Smith contributes a masterly article on the subject of Lobar Pneumonia. The article on Cerebro-Spinal Meningitis by Netter, of Paris, is an interesting contribution in view of the light that has recently been thrown upon the subject by recent observations upon the pathogenesis of the disease. Dr. Nicholls, of Dominica, discusses the little understood subject of Yaws. Ernst Ziegler's discussion of the Pathological Vital Processes in Inflammation is an exceedingly clear and luminous exposition of the subject by a very able writer. Among other notable articles is the one on Typhoid Fever by Dr. Thacher, of New York. The volume fully maintains the very high standard of excellence achieved by its predecessors.

Twentieth Century Practice of Medicine. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Volume XVI: Infectious Diseases. New York: William Wood & Company, 1899.

PROGRESSIVE MEDICINE.

The second volume of Progressive Medicine contains a review of the subjects of Surgery of the Abdomen, by Coley; Gynecology, by John G. Clark; Diseases of the Blood, by Stengel; and Ophthalmology, by Jackson. The volume brings us up to date in all advances that have been achieved by clinical medicine. There can be no doubt of the extreme value of this method of presenting medical progress, coming as it does to the reader fresh every three months.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., etc. Volume II, June, 1899: Surgery of the Abdomen, including Hernia; Gynæcology; Diseases of the Blood; Diathetic and Metabolic Disorders; Diseases of the Spleen, Thyroid Gland, and Lymphatic System; Ophthalmology. Philadelphia and New York: Lea Brothers & Co., 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Closure of the Abdominal Incision After Laparotomy, and the Tendency to Hernia.

In the course of time abdominal operators have reached a proficiency in technique and an assurance in the application of the details of asepsis that have made laparotomy a comparatively facile and safe procedure. There has, however, remained an objection not foreseen at first, but ever becoming more insistently prominent as the number of abdominal operations increased. Despite the most anxious care and most solicitous technique, ventral herniæ occur at the site of the abdominal incision and often make life miserable for the patient. The frequency of the occurrence of hernia has become one of the great sources of opprobrium to modern abdominal surgery, and it is not unusual to have patients who do not fear the result of the operation itself hesitate to undergo it because of the fear of the subsequent hernia that they have learned to dread from the experience of friends or acquaintances.

The review of the recent results of postoperational hernia by Dr. John G. Clark, of Johns Hopkins Hospital, in the recent number of *Progressive Medicine*, shows that a number of factors which have usually been considered as influencing the production of hernia really have no etiological connection with it. For instance, permitting the patients to get up after seventeen or eighteen days does not predispose to hernia, and keeping them in bed for longer periods does not prove a prophylactic against its occurrence. The wearing or failure to wear a bandage after operation does not affect the liability to hernia either favorably or unfavorably. Pregnancy following immediately or remotely after operation plays no part in the production of hernia, despite preconceived notions to the contrary.

It is evident, then, that the occurrence of ventral hernia after operation is mainly due to the method of closing the abdominal wound, despite all that has been said by certain gynecologists abroad as to the advantage to be derived in this matter from making the incision through the rectus muscle. Dr. Clark, from his experience at Johns Hopkins, as well as his records of the subject, decides in favor of the incision in the linea alba. Two things are necessary to lessen the tendency to hernia in closing the incision. First, the fascia—*i.e.*, the aponeurosis of the recti muscles—must be carefully

brought together so as to secure complete and firm continuous union along the line of section. The essential point in placing the sutures is to catch enough of the aponeurosis to firmly bring the borders of the fascia not only into complete coaptation, but also to slightly elevate them into a median ridge. The coaptation of the fascia must be especially exact at the lower end of the incision, where the liability to hernia is greater, because the layers of fascia are fewer.

The second requisite for a firm cicatrix is to secure healing *per primam*, and this is best secured by leaving no dead spaces in which blood or lymph may collect to become infected, and by allowing no penetrating cutaneous stitches through which microorganisms may penetrate from the surface despite the most careful precautions. On the whole, this subject of the avoidance of hernia by a careful technique in the closure of the abdominal incision would seem to have reached a development that leaves very little to be desired, and it is evident that it is only in patients with especially relaxed tissues or with natural tendency to hernia that the operator may feel exempt from responsibility in future cases of this annoying sequela.

Surgical Treatment of Cancer of the Stomach.

Guinard (*Medical Review of Reviews*, June 25, 1899) has recently written a monograph upon this subject, and the author sums up his teaching as follows:

Surgical treatment of cancer combats both the specific affection and the secondary stenosis. In at least one-third of all operated cases it gives a respite from suffering of from one to eight years, while the operative mortality has sunk to ten per cent.

Exploratory laparotomy should invariably be performed whenever analysis of the gastric juice reveals lack of pepsin with presence of lactic acid after a trial breakfast, or when medical skill is unable to increase the body weight.

Every tumor found in the stomach should be removed if it be removable.

Contraindications to resection are found in a bad general state of the body, and whenever metastases are found in the viscera or in the lymph-ganglia (if the latter organs are non-removable); also naturally when certain immovable adhesions have formed with the duodenum or esophagus.

In resection of the stomach the lines of incision should be well beyond the possible limits of the neoplasm, even if it be necessary to remove the entire organ. The duodenum is not often attacked by the cancer.

To reestablish the continuity of the digestive tube any process of anastomosis may be used which serves this purpose, save operations necessitating suture *en raquette* (mortality about thirty-eight per cent).

After pylorectomy the cut surface of the stomach is united from above downward, and the cut surface of the duodenum is united preferably to the posterior surface of the stomach. In the opposite case gastrojejunostomy should be performed.

The conditions to insure success are:

1. Before the operation, purgatives and lavage of the stomach.

2. During the operation, strict asepsis, complete anesthesia, sutures placed only in sound tissues, avoidance of all tension in sutures, use of continuous spiral segmented hemostatic suture, and avoidance of all hemorrhage, however slight.

3. After the operation, feed the patient by the mouth from the second day, practice intestinal antisepsis and lavage of the stomach, and do not count upon success until the patient has had a passage from the bowels.

The Treatment of Hydatid Cysts of the Liver.

At the meeting of the Paris Academy of Medicine held on May 30, 1899, Professor Dieulafoy (*Lancet*, June 17, 1899) related two cases of cure of hydatid cyst of the liver. The first case, in which suppuration had occurred, was treated by abdominal section and incision of the sac; the second, in which the fluid was in a normal condition, was simply aspirated. Professor Dieulafoy brought forward these two cases in order to compare the two methods of treatment and to study the indications for preferring the one to the other. According to Professor Dieulafoy those cases of death which occur within a few minutes of the puncture of the sac are due to the escape into the peritoneal cavity of hydatid fluid, which is extremely toxic. The most minute precautions should be observed to prevent such a thing happening, and the chief point is to empty the sac as completely as possible and not simply to partially evacuate it, as has been the case nearly every time that death has followed. A very fine needle should be used and never touched after insertion. If by some misfortune this should become blocked, it is best to leave it alone and insert another. The two needles must be removed together as soon as the fluid ceases to flow. No pressure must be made on the abdomen with the idea of helping the escape of the fluid, for such pressure is very likely to make the needle come out of the liver, and so escape of fluid into the peritoneum is not unlikely to happen. Aseptic puncture aided by aspiration and with observation of the above mentioned precautions is applicable, according to Professor Dieulafoy, to about

half the cases seen, especially to those cases where the cyst is not very old or very large and where there is an absence of symptoms indicating infection, such as pain and rigors. Abdominal section with incision and removal of the sac should be reserved for cases in which the cyst is very large and has existed a long time, in which adhesions are present, and in which infection of the sac has taken place.

Prostatic Hypertrophy.

Raymond Guiteras, in the *Journal of the American Medical Association* of July 1, 1899, says that castration, vasectomy, and iliac ligation are of very little benefit in prostatic hypertrophy, and that the choice of operative procedure is between prostatectomy and the Bottini. The writer thinks that the former is by far the most difficult and dangerous; in fact, he believes that in the hands of a good genito-urinary surgeon in equally picked cases the mortality in prostatectomy would be found to be twice that of the Bottini, and that in the hands of the general practitioner it would be three times as great. There are certain cases suitable for enucleation, and others only for the Bottini. Those for enucleation are the large, so-called glandular hypertrophies, where the prostate feels like a good-sized tumor by the rectum, and the urethra is felt to be much elongated and distorted by the hypertrophy. Here the operator can find something to enucleate, and the pieces come away easily. The cases calling for the Bottini are more those where the hypertrophy is not marked, but where rectal examination shows a marked induration, and urethral examination shows middle lobe impediment. In many of these cases an enucleation would be impossible, while in no case of the large tumor variety would a Bottini operation fail to be of benefit. The internal treatment after an operation consists in urinary antiseptics, diluents, and antispasmodics, if necessary. As a diluent, water taken in large quantities is usually sufficient. As a urinary antiseptic, salol in ten-grain doses, three times a day, or urotropin in the same strength. Benzoate of sodium and benzoic acid in fifteen-grain doses are also of service. The antispasmodics are codeine, morphine, and belladonna. These are given for frequency, pain, tenesmus, or burning, and may be prescribed singly or combined, and afford the patient a great deal of relief.

Advice to Gonorrheal Patients.

F. C. Valentine (*Philadelphia Medical Journal*, July 8, 1899) thinks that the following advice should be given all gonorrheal patients:

1. The importance of gonorrhea as a disease, the necessity of its

prompt, early treatment, and its dangers to the one infected and to others, should be impressed upon the patient, fortified with such explanation as his intelligence and education admit.

2. Witticisms regarding gonorrhea, besides being in bad taste, are likely to cause patients to view it in a trivial light.

3. Clap, if properly treated from the very beginning of the first manifestations of the disease, is bereft of most of its dangers, and is, in many instances, cut short.

4. The complications of clap may arise early in the disease and may prove fatal to the patient.

5. Clap can render man incapable of sexual intercourse and unable to procreate children.

6. A man may believe himself cured of gonorrhea, marry, and many years later infect his wife.

7. It is the duty of a person with clap to see that he carries no infection to another person, or to any article from which another can become infected.

8. No inborn or acquired immunity to gonorrhea exists.

9. Patent medicines, secret preparations, and "favorite prescriptions" are useless and dangerous in clap, as in any other disease.

10. Clap is not a self-limiting disease—*i.e.*, it does not "run its course," but requires active treatment, no matter how mild the attack.

11. No patient should be discharged as cured until it is proven that he can no longer convey the disease to others.

12. The only means of preventing clap is in education. The outlines of the physiology and pathology of the genito-urinary organs should be taught in boys' high schools, in literary universities, and by evening lectures to the working people.

The Principles that Should Guide Us in the Treatment of Tubercular Disease of the Hip-joint.

W. Arbuthnot Lane, M.S., in the *Clinical Journal* of June 21, 1899, says that in tubercular disease of the hip-joints we should endeavor as far as we can:

1. To keep the joint at rest in the position that is most advantageous to the patient, should it finally ankylose or its movements become limited. In the case of the hip-joint this is one of extension.

2. To avoid as much as possible any damage to the opposing inflamed articular surfaces by the transmission of continuous or intermittent force along the femur to the innominate bone.

3. To improve the health of the patient by suitable diet and change of air, and to increase his vital capacity.

4. To influence prejudicially the growth of the tubercular organisms by the internal administration of such powerful germicides as mercury, arsenic, and the iodides of sodium, potassiun, and ammonium.

5. In the event of the disease progressing, as evidenced by the presence of a collection of fluid, loss of weight, the formation of depreciating progressive deformity, the appearance of a focus of disease elsewhere, etc., an operation should be performed, the objects of which are (*a*) to effect as complete a removal of the tubercular material as possible, and (*b*) to retain the bones in such a mutual relationship to one another as will interfere to the smallest possible extent with the normal mechanics of the pelvis and lower extremity and with the subsequent convenient physical relationship of the individual to surroundings.

MEDICINE.

Some Remarks on Typhoid Fever Among Our Soldiers During the Late War with Spain.

Victor C. Vaughn, in the July number of the *American Journal of the Medical Sciences*, says that he concludes from investigations made by Drs. Reed, Shakespeare, and himself that a regiment thoroughly infected with typhoid fever does not lose the disease when it changes its locality, even when it goes to a perfectly unobjectionable site and leaves all its sick behind. It is altogether probable that the clothing, blankets, and tentage of the men become thoroughly infected with the typhoid bacillus. When a regiment becomes saturated with typhoid fever change in location alone is not sufficient to get rid promptly of the disease. It is believed in such a case that it is necessary to thoroughly disinfect clothing, blankets, tentage, etc. If a regiment is moved before the infection has become marked, typhoid fever may disappear or at least decrease. Apparently a sea voyage of some days or weeks might rid a command not widely infected with typhoid fever of the disease. A regiment thoroughly infected with typhoid fever does not lose the disease or lessen the number of cases after a short sea voyage. This was illustrated by the Nineteenth Infantry, which after becoming thoroughly infected with typhoid fever was transported to Porto Rico. The progress of the disease apparently was not in the least retarded by this voyage.

Neurotic Insufficiency of the Cardiac Muscle.

At the recent Congress für Innere Medizin, held in Berlin (*Medical Press*, June 28, 1899), Dr. Jacob Cadowa read a note on neurotic insufficiency of the cardiac muscle. He formulated the following

proposition: There is a form of disease similar to degeneration of the cardiac muscle, and also mistaken for it, that, in spite of dilatation and arrhythmia, as well as equal size of the pulse, by a certain order in the disorder can be distinguished from a pulse of good tension, and notwithstanding the symptoms of insufficiency allows of a good prognosis. It might be named pseudo-degeneration of the heart. There is a chronic tachycardia, with regular pulse and insufficiency, easily mistaken for Basedow's disease, especially when associated with a slightly enlarged thyroid and prominent eyes. It differs, however, from Basedow's disease in the absence of the hot skin — on the contrary the skin is rather cool — absence of thirst, voracity, cardiac murmurs, in short, of all the symptoms of exaggerated tissue change. The patients do not bear cold-bath treatment, but are improved by everything that relieves the anemia. The condition improves in a short time — in as many weeks as the Basedow requires months. The Basedow has not, with but few exceptions, a tense pulse. The insufficiency is such as arises from hyperenergy. Improvement takes place most quickly through measures that reduce the tension. The capacity of life of the heart is a constant product of its work with the time which this takes to perform. Dilatation and tachycardia spring from a common source.

Scarlet Fever.

Professor Seitz, the director of the Children's Polyclinic of Munich (*Albany Medical Annals*, July, 1899) has had great success in the angina of scarlet fever by injecting carbolic acid directly into the tonsils. The treatment was first suggested by Hudner, of Leipsic. A small syringe with a long needle is filled with a three-per-cent solution of carbolic acid, and a few drops injected in several places in both sides. The needle is made with a shoulder about one-eighth of an inch from the point, so that it cannot be inserted too deeply into the neck. The procedure is not painful. Dr. Seitz has used these injections in very many cases, and has never seen carbolic acid intoxication resulting from their use. The temperature soon lowers and there is an improvement in the general condition. He continues the injections as long as the tonsils are enlarged and there is high fever. This treatment has been tried in diphtheria, but without much success, and it seems only serviceable in the angina of scarlet fever.

The Tuberculous Process in Children.

David Bovaird (*New York Medical Journal*, July 1, 1899) says the primary lesion of tuberculosis in children is regularly in the bronchial

lymph nodes or lungs. As to early manifestations of tuberculosis in children, these are certainly indefinite and uncertain. Tuberculous infection of the bronchial lymph nodes as a rule cannot be diagnosticated. Latent tuberculosis is often aroused and disseminated by the invasion of another disease, such as measles, diphtheria, etc., the presence of tuberculosis not being suspected. The common type of tuberculosis in children is acute miliary tuberculosis. The course of tuberculosis is often confused with bronchial pneumonia in enterocolitis. The early manifestations are emaciation, fever, and the presence of râles over the lungs. These are insufficient for purposes of distinction. The terminal lesions include: (1) Extension of the tuberculous process in the bronchial lymph nodes and lungs, resulting in the formation of abscesses, cavities, etc. (2) Diffusion of tuberculous infection consisting of acute miliary tuberculosis, the principal viscera being affected in the following order: spleen, liver, brain, kidney, heart. The involvement of the brain is most important, the meningitis being regularly fatal. (3) When the bone is involved and there is prolonged suppuration, waxy degeneration of the viscera may occur.

THERAPEUTICS.

Myxedema Treated with "Colloid" Material.

R. J. M. Buchanan (*British Medical Journal*, June 17, 1899) reports a case of myxedema treated with colloid material from the thyroid gland. Material was prepared in the form of "palatinoids," each one containing an equivalent of five grains of the fresh gland. The patient, says the writer, commenced the treatment on January 25, 1898, with "colloid" material, taking one palatinoid at night. The dose was gradually increased to four in twenty-four hours by February 22; it was then reduced to two, and by June to one, in twenty-four hours. No symptoms of "thyroidism" arose during the treatment. The result was a rapid disappearance of all symptoms and a return to normal health. The hair during the treatment fell off; the absolute baldness was followed by a thick crop of brown hair, which required cutting on three occasions before June. The pulse and temperature returned to normal; the skin also, with normal perspiration; the mental inactivity disappeared; inflection and modulation of the voice returned, all the movements became easy, and walking was no trouble. The body weight gradually sank. Sleepiness disappeared, and the appetite increased almost to voracity. So distressing had been his condition before treatment that he was unable to attend to his daily business in anything like a satisfactory manner, but since treatment

he has followed his occupation with increasing pleasure and good results. At the present time (May, 1899) he remains in excellent condition, taking a daily dose of one or two palatinoids of the "colloid" material. His appearance has so altered that he has repeatedly to explain to his customers that he is the same person they knew before, and that the stout old gentleman with the white hair was not his father, who had, as they believed, died of "dropsy."

From March until June the author did not see him, and no record was made. It was found inconvenient to collect the urine during every twenty-four hours; the patient attended to business during the whole period of treatment. It is interesting to note that with loss of body weight there was an increase in the output of urea up to a certain point; then, although the body weight went on decreasing, the urea diminished in quantity, and at this period the maximum dose of "colloid" was being administered. At present the weight remains at 175 pounds, and the patient is taking one or sometimes two palatinoids per diem.

The Behavior of Some Compounds of Iron in Artificial Digestion.

At a recent meeting of the Reale Accademia di Medicina in Turin (*Lancet*, June 17, 1899) an important paper on the above subject was communicated from the Chemico-Physiological Laboratory directed by Dr. Piero Giacosa, professor of materia medica in the sub-Alpine school. The researches and conclusions which it embodied were the work of Signor Gola, student in medicine. He examined various specimens of the albuminates of iron of commerce, or as prepared by himself in the laboratory according to the prescribed methods, and thereafter he examined the peptonates and the "ferratin" of commerce. Besides the "classical reaction" of the sulphide of ammonium he employed a new reaction of Macallum, modified by Marfori, to distinguish the organic from the inorganic compounds of iron. This reaction consists in the addition to the ammoniacal solution of the preparation in question of some drops of an aqueous solution of hematoxylin, which is colored blue with the inorganic and a violet red with the organic compounds of iron. He concluded that the albuminates have reactions of organic iron, while the peptonates and the "ferratin" of commerce comport themselves like the common citrates and lactates of iron. Reverting to the researches of Professor Cervello, of Palermo, on the absorption of medicinal iron in the intestine, he took the various compounds already studied and the citrate and lactate and the perchloride of iron and subjected them to artificial digestion with albumin in gastric juice and in pancreatic juice, and to

the double gastric and pancreatic digestion. The results were these: the albuminates, the peptonates, the "ferratin," and the perchloride of iron, mingled with albumin, yield, after digestion, a reaction of organic iron, while the citrate and the lactate preserve their inorganic nature; the transformation takes place if the albumin is mingled with the preparation *in via digestionis*, whence may be deduced a confirmation of the old practice of exhibiting the preparations of iron at meals rather than in the fasting stage.

Treatment of Chorea.

The treatment of chorea is a very simple matter, says Joseph Collins in the June number of the *Post-Graduate*. A vast majority of patients would recover just as easily without medical treatment if they were put under the proper methods as they do when subjected to the most orthodox plan of treatment. Rest is by far the most important measure in the treatment of chorea, and the more complete the rest the speedier the cure. Choreal children should be at once taken out of school and the parents urged to put them to bed and keep them there if possible. Many of the patients are in a run-down and mentally overwrought condition, the result of improper nutrition, prolonged application to study, etc. Consequently rest and freedom from all sorts of excitement, combined with careful attention to the diet, is the most rational prescription. The medicines that are of service in chorea are few in number. The most important drugs are arsenic, antipyrin, quinine, exalgine, iron, and the bitter tonics. Arsenic may be given in the shape of Fowler's solution or the arseniate of soda. In the latter form it has less tendency to disorder the digestion, and it seems to be quite as beneficial. Exalgine is a potent drug to ameliorate the severity of the choreal movements, and it also seems to abbreviate the duration of an attack. The serious objection to its use is that it causes profound hemolysis.

Itrol and Actol.

Schill (*Therap. Monats.; British Medical Journal*, June 24, 1899) summarizes the chief therapeutical value of these silver salts. In the treatment of the acute stage of gonorrhea Wesler begins with sol. itroli 0.025:200 D. in vitr. flav.; the fluid is injected into the urethra four times a day. A little later on the strength can be increased—sol. itroli 0.03–0.04–0.05:200 (this would correspond to 1:8000–4000). The patient first urinates and begins by injecting half a syringeful; the amount may gradually be increased until one syringeful has been injected. The fluid must be retained for some minutes in the urethra.

Solutions of itrol readily decompose when brought into contact with organic material; it is therefore necessary to wash out the syringe with hot water before using it, and also to pour the silver solution in a clean vessel. In the consulting-room Wesler uses a concentrated solution 0.25:1000, which he dilutes with warm water. There is no burning or smarting pain either during the injection or after it. He has never met with cases of edema, hematuria, or retention following the use of the silver salts. Wesler has treated fifty cases. It is important to commence treatment as early as possible in order to prevent the gonococci from implicating the deeper parts of the mucous membrane. Schill has employed this remedy during the last year, and has treated 100 cases. He gives some practical rules to be observed in the treatment: (1) Itrol injections are to be commenced as soon as possible; (2) they should be carried out four or five times a day; (3) the syringe should contain six to eight cubic centimeters; (4) the fluid must remain ten minutes in the urethra after the latter has been cleansed by half a syringeful of the injection; (5) the strength of the injection at the beginning should not exceed 0.02:200. The solution must always be lukewarm.

The Treatment of Cerebrospinal Fever.

Dr. Wm. Osler, in the Cavendish Lecture (*British Medical Journal*, June 24, 1899) delivered before the West London Medico-Chirurgical Society on the etiology and diagnosis of cerebrospinal fever, said that in the series of cases that had come under his observation no special drugs had been used. Morphine had been freely given to control the pain. Ice-sponging had been employed whenever the temperature reached over 102.5°. The mortality, considering that the cases were as a rule quite severe, had been low—only eight of eighteen cases in the hospital, and nine among the twenty-one cases which he had otherwise seen. In two of the cases the spinal canal had been opened, drained, and irrigated. Winter in tuberculous meningitis removed the final process of the second lumbar vertebra and drained the spinal canal. Von Ziemssen first attempted the use of local therapeutics to the membranes of the cord by injecting a weak solution of iodine in a case of meningitis, and later Sahli practiced painful drainage through a cannula and catheter. So far as known, said Dr. Osler, an extensive laminectomy had not been done for acute spinal meningitis until their first case, November 6, 1898, in which the operation was suggested and performed by Dr. Harry W. Cushing. The spinal canal was thoroughly irrigated with salt solution and a quantity of purulent exudate washed out. No change followed in the existing paraplegia.

The bladder and kidneys became infected, and he died about two months after the operation. The paraplegia persisted. At necropsy the spinal meninges were smooth and looked perfectly normal. It was impossible to say where the dura mater had been incised, and there were neither adhesions nor areas of the thickening in the pia-arachnoid. There were extensive changes in the cord itself and in the nerve roots.

Soluble Argonin in Gonorrhea.

Jellink (*British Medical Journal*, June 17, 1899) describes a new preparation of argonin, called "Argonin L." The disadvantages of the older argonin recommended by Jadassohn were its difficulty of solution and the ease with which it decomposed. The new argonin is easily soluble in cold water and can be kept in solution for several months without decomposing; also it contains ten per cent of silver instead of 4.2 per cent. The writer uses a one-per-cent solution for cases of both anterior and posterior urethritis. Cases of anterior urethritis were treated by injections thrice daily and retained for five minutes. Posterior urethritis was treated by instillation with Ultzmann's syringe. After disappearance of the gonococci, astringent injections of zinc sulphate were used, but the patients had also three injections weekly of the argonin. Frequent examinations of the urine were made, and the absence of gonococci and threads demonstrated. Other patients were treated with the old argonin, and the results showed the superiority of the new argonin.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Cancer as a Parasitic Disease.

Roswell Park, in the *Maryland Medical Journal* of June 17, 1899, says that it is safe to maintain to-day that the origin of cancer is now purely a biological problem. To act as do epithelial cells when they produce cancer, there must be present some stimulus, either internal or external. To acknowledge the former is to confess that there are influences at work which we cannot appreciate, much less name — subtle influences whose effects only are perceptible—or else that it is purely a question of heredity which of itself is the most subtle and ill understood of all. If we put aside, however, these hypotheses, there is still before us the possibility of stimuli from without. Most promi-

nent of the external stimuli which appeal to our reason as a possibility is naturally some form of parasite, although a long list of improbable external stimuli might be enumerated. What has especially called our attention to this possibility of an external stimulus in the form of a parasite as the etiological factor in cancer has been and is the presence within cancerous tissues of bodies of varying form which cannot definitely be classified as either degeneration products of the cells or as true parasites. The cancerous process is not to be in all respects compared with known investigations, save in certain obvious directions, until the exciting cause is finally definitely recognized. The communication of cancer from one part of the body to another is not infrequent, and is now a well recognized possibility or even danger. "I mean by this," says the writer, "direct communication, and not a metastatic invasion."

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Direct Bronchoscopy in a Case of Foreign Body in the Lung.

Dr. Killian, of Freiburg, in the *Münchener Medicinische Wochenschrift*, 1897, No. 37, reported an interesting case in which he made use of direct bronchoscopy. In the same journal, under date of May 30, 1899, the same observer reports a very successful procedure for the removal of a bone 18 millimeters long and 10 millimeters in breadth which had been inspired by a child four years old while at play.

When first observed, a few hours after the accident, the child was cyanosed and the breathing considerably obstructed, with weakened respiratory sounds over the right lung.

During an attempted laryngoscopic examination with the Kirstein tongue depressor the child had an attack of coughing followed by much increased dyspnea. The difficult breathing continuing, tracheotomy was performed. At the moment the trachea was opened a sudden cough drove the foreign body up to the tracheal opening, but before it could be grasped, the sudden strong inspiration following the cough drew it downward again, and no manipulations were successful in bringing it up again into the tracheal wound.

About an hour after the tracheotomy, when the child had recovered from chloroform narcosis, the trachea was cocainized and a Kasper electroscope, consisting of a tube of suitable size and carrying an electric light, was introduced into the trachea, and the operator found the foreign body wedged into the right bronchus.

On account of the small lumen of the electroscope the use of

forceps was regarded as impossible, so the operator had prepared a small sharp hook. Wedging this hook safely between the bone and the bronchial wall he crowded the hook downward, then turned the point into the bone with some pressure. Gentle traction loosened it, and it was dragged safely up to and out of the tracheal wound.

In view of the narrow lumen of the tube and the fact that the operative field had to be kept continuously in view, the manipulation demanded no small modicum of manual skill and dexterity.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Resection of the Cervical Sympathetic in the Treatment of Glaucoma.

Jonnesco reports in the *Wiener Klinische Wochenschrift*, No. 17, 1899, eight cases of glaucoma in which he resected the cervical sympathetic; sufficient time has elapsed in most of the cases to determine the merits of the operation. It has been known for some time, as the results of physiologic experiments on animals, that section of the cervical sympathetic produces dilatation of the blood-vessels of the eye and consequently lessens intra-ocular pressure. Iridectomy has a curative effect only in acute non-hemorrhagic glaucoma, while in the chronic forms there is either no effect or the results are transitory. Resection of the superior ganglion of the cervical sympathetic is thus indicated in exactly those cases in which iridectomy is powerless to give relief, in cases in which nervous disturbance is a chief factor causing the trouble. The operation may be performed through an incision either before or behind the sternomastoid muscle. Incision in front of the muscle is selected for the resection of the superior ganglion, through which all the ocular fibers pass. The incision begins at the angle of the upper jaw and extends downward along the border of the muscle; the muscle is drawn backward and outward, a grooved director is passed under the deeper layer of the aponeurosis, and this is divided; the jugular vein is then laid bare and is drawn outward and backward, exposing the internal carotid artery on its inner side; the artery is drawn forward, avoiding the vagus, and in the space thus formed the superior cervical ganglion is found; it is isolated on the grooved director, seized with forceps, and the afferent and efferent fibers are divided and the ganglion is pulled away. Jonnesco performs the double-sided operation complete in

fifteen minutes. After the operation there is congestion of the face and eyes and the nose, giving rise to free nasal secretion and tears. The permanent symptoms are: narrowing of the pupil, sinking of the eyeball, drooping of the upper lid, and narrowing of the palpebral slit.

Probably the first operation of this kind in this country was reported by Drs. J. M. Ball, E. C. Renaud, and W. Bartlett in the *New York Medical Journal* of July 1, 1899. They excised the right superior cervical sympathetic ganglion for glaucoma. The ganglion was cut high up and all its branches severed, and about one inch of the sympathetic below the ganglion was removed. The patient was immediately relieved from pain, and the tension decreased to plus 1. Slight ptosis followed the operation. They think that the relief from pain alone will justify the operation in glaucoma without complete loss of vision.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH., Attending Neurologist to Harper Hospital.

Varying Type of General Paresis.

The experience of C. H. Hughes, M.D. (*Journal of the American Medical Association*, June 24, 1899), corroborates that of Mendel, who has already called attention to the following changes in the present type of this fatal disease: (1) Marked increase in the proportion of dementia cases; (2) more frequent remissions than formerly observed; (3) apparent arrest of symptoms; (4) the more frequent appearance in the female sex. He also notes the frequent appearance in the young of both sexes.

Dr. Hughes has noted a more frequent appreciation on the part of the patient that something was wrong — consciousness of impaired memory, etc. For these changes he accounts in part thus: "The telephone, the graphophone, the phonograph, the long-distance 'phone, the megaphone, and wireless telegraphy, as well as the ocean cable and the rapid modes of travel, are all determining factors. For with these annoyances to man the night cometh as of yore, but many a man sleeps not in consequence thereof. The vigilance of one's business, by these means, passes often into that morbid vigilance that robs the psychic gray cortex neurons of the rest they need for daily recuperation, and paresis is precipitated in the organically predestined."

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ORIGINAL CONTRIBUTIONS.

NEPHRITIS WITHOUT ALBUMINURIA.*

BY CHARLES GODWIN JENNINGS, M.D., DETROIT, MICH.

The relations of albuminuria and cylindruria to each other and to renal disease have been in the last few years the subject of much discussion. Two cases of nephritis have come recently under the observation of the writer, showing the interesting and rare clinical variation of an abundant cylindruria with persistent absence of albumin.

Case 1.—Mrs. G——, aged about forty years. Highly neurotic temperament; family history of gout. She has been under the writer's care for about six years. Several times during that period symptoms referable to the bladder and kidneys have demanded urinary examinations. The examinations were always negative.

About the middle of August, 1897, while spending the summer at the seashore, she was taken with what appeared to be an attack of ordinary summer diarrhea. It proved rebellious to medical treatment, and at the end of six weeks the diarrhea was no better. She returned home about October 1, stopping in New York, where she became seriously ill. I saw her the day after her return to this city. She then presented the symptoms of an ordinary bowel catarrh, but with the addition of a prostration and an indefinable feeling of severe illness out of harmony with the rather moderate bowel symptoms. She had not lost much flesh, and aside from an unusual pallor did not look very ill. The pulse was slow, 64, and of high tension. No cardiac hypertrophy could be made out, although there was an accentuated aortic second sound.

Qualitative analysis of the urine on October 2, and quantitative

* Read before the Detroit Medical and Library Association.

analysis of the twenty-four hours' urine on October 5, gave results as shown in the table below.

From the urinary findings, the persistent diarrhea, the prostration, and the cardiovascular symptoms, the diagnosis of uremic diarrhea was made.

The patient was put to bed, and under the influence of free catharsis, a non-proteid diet, and the liberal ingestion of fluid, renal competence was quickly reestablished. By October 12, as shown by the analysis, urea excretion was about normal. Albumin absent; casts and epithelium still abundant. The diarrhea ceased, and the patient's strength rapidly returned.

An injudicious liberty of diet and exercise was permitted during the last week in October. On the 29th the old gastric distress returned, quickly followed by a condition of intense nervousness and persistent nausea and vomiting. The pulse dropped to 40 per minute, and held about that rate for five days.

The twenty-four-hour specimen of the 30th showed the return of the renal insufficiency. After ten days of persistent vomiting came three days of some amelioration in the symptoms. This period corresponds to the increased elimination of urea, as shown in the analyses of the 11th and 13th. Then the grave symptoms again returned, and the urinary findings of the 16th and 17th show serious renal insufficiency. About the 20th the renal function again began to improve, and from this time the patient slowly convalesced. She was out of bed by the middle of December, and on the 10th of January left the city to spend the remainder of the winter in Southern California. She did well in California, and by spring she was able to endure reasonable exertion and a fairly liberal diet. She came East in June, spent the summer at the seashore, and returned to Detroit last month. She will go to California again for the winter.

Aside from various expressions of her neurotic temperament, and an occasional indigestion, this patient is now pretty well. A recent analysis shows an abundant urine of low specific gravity and a deficiency of urea. No albumin or casts. The aortic second sound is accentuated, and, as seen by the accompanying sphygmogram, the pulse is of high tension.

CASE I.—December 8, 1898. Pulse 64; pressure 2 ounces.

Only twice during the period that this case has been under observation has albumin been found in the urine, and then only a faint trace demonstrable by careful testing.

The absence of albumin, with the grave symptoms of renal insufficiency, and the abundant cylindruria, was a condition of unusual interest, and for two months almost daily search for albumin was made; the urine of different times of the day—in the morning, the evening, before and after meals—and with all accessible reagents: heat, nitric acid, potassium ferrocyanide, potassio-mercuric iodide, picric acid, Millard's reagent, trichloracetic acid, applied with the most careful technique, all failed to show albumin.

CHART OF URINARY ANALYSIS OF CASE I.

	Date.	Quantity of urine in 24 hours.	Specific gravity.	Urea.	Albumin.	Sediment.
	1897.					
Diarrhea	Oct. 2	.....	.....	.....	Trace.	Abundant large and small hyaline and finally granular casts. Degenerated renal epithelium—granular débris; many leucocytes and uric acid crystals.
	Oct. 5	27 oz.	1.015	147 gr.	Absent.	
Apparent convalescence	Oct. 10	60 oz.	1.008	300 gr.	Absent.	
	Oct. 12	72 oz.	1.017	460 gr.		
Uncontrollable vomiting	Oct. 30	80 oz.	1.007	182 gr.	Absent.	
	Nov. 6	24 oz.	1.011	142 gr.	Trace.	
	Nov. 11	64 oz.	1.010	262 gr.	Absent.	An occasional hyaline cast.
	Nov. 13	64 oz.	1.009	233 gr.	Absent.	
	Nov. 16	54 oz.	1.005	123 gr.	Absent.	
	Nov. 17	75 oz.	1.005	136 gr.	Absent.	
Convalescent	Dec. 10	96 oz.	1.008	.....	Absent.	
	Dec. 27	72 oz.	1.015	.....	Absent.	Casts absent.
	1898.					
	Dec. 8	66 oz.	1.009	233 gr.	Absent.	

Case 2.—Mr. P——, aged fifty-five years. No alcoholic or gouty tendency. From early manhood he has suffered from frequent and severe intestinal autointoxication headaches. He has been under my professional observation for sixteen or seventeen years; for the last five years continuously, before then occasionally. He is a man of

large financial interests, and for many years one of the departments of his business demanded an attention that kept him on duty practically day and night. Four years ago he was nervously prostrated from overwork. I sent him South for the winter, and he returned very much improved in every way.

In September, 1896, he developed a simple glaucoma, for which he was treated by Dr. Parker.

During these four years he has presented symptoms that have repeatedly suggested an interstitial nephritis, and numerous careful urinary analyses have been made. No urinary characters confirming these suspicions were ever found. I was constantly anticipating a renal complication, but never could confirm my suspicions by urine analyses.

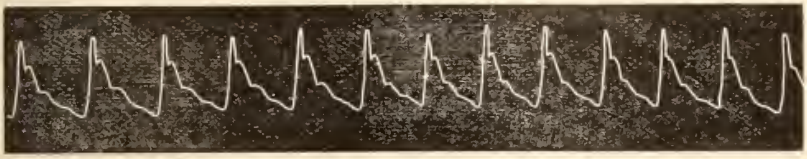
In March, 1898, he consulted me again for the old symptoms, and this time evidences of the renal trouble were undoubted. The accompanying chart gives the urinary findings of various analyses since that time.

CASE 2.

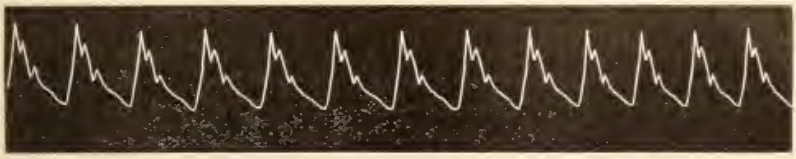
Date.	Quantity of urine in 24 hours.	Specific gravity.	Urea.	Albumin.	Sediment.
1897.					
April 13	.....	1.014	.....	Absent.	
November 6	.....	1.011	.....	Absent.	
1898.					
February 15	.....	1.026	.....	Absent.	
" 20	34 oz.	1.022	247 gr.	Trace.	Hyaline casts.
" 27	.....	1.015	.....	Absent.	
March 27	66 oz.	1.010	300 gr.	Absent.	Hyaline casts.
June 4	84 oz.	1.009	382 gr.	Absent.	Hyaline casts.
September 23	74 oz.	1.010	202 gr.	Absent.	

About May 1 the patient consulted Dr. Frank Billings, of Chicago, who confirmed the diagnosis of chronic interstitial nephritis. Later in the history of the case Dr. F. W. Mann was called in consultation. On May 20, after a hard day in settling up some large and very harrowing business matters in a neighboring city, he developed an incomplete right hemiplegia without aphasia. It was plainly a uremic phenomenon. In a few days motion was fully restored, although there remained for several weeks a feebleness of the arm and hand that was quite marked after fatigue. I sent him into the country and away from his business for the summer. He steadily improved in every way, and so long as he kept away from the city and his business connections he was very well. A day at his office or the bank would bring back his headache and physical and mental exhaustion. He returned to the city in October, and is now able to endure a few hours' work every day, and continues slowly to improve.

At the same time of nearly every day the patient has an annoying headache. He has frequent pains in the loins and often fleeting neuralgia. Palpitation often annoys him. His pulse is robust and of high tension (see sphygmogram). Arteries show general thickening; exaggerated apex impulse, and apex displaced about half an inch to the left. Accentuated aortic second sound.



CASE 2.—October 16, 1898. Pulse 92; pressure 2 ounces.



CASE 2.—December 8, 1898. Pulse 80; pressure 2 ounces.

In the above report are presented two cases of renal disease, in one of which life was once gravely threatened by uremia, and in the other there is a continual renal inadequacy that physically incapacitates the patient and is a menace to his life. The urine of these patients has been examined repeatedly over a long period, and with two exceptions in one case and one in the other it has been free from albumin.

Until these cases came under my observation I had never met with a case of what I recognized as a nephritis with an absence of albuminuria extending over any length of time. While I was well aware that cases of non-albuminous nephritis had been reported, and that temporary absence of albumin was not uncommon, especially in contracted kidney, the fact that nephritis could progress to an immediately dangerous stage with continued absence of albumin had not been emphatically presented to my mind.

I am free to confess that in diagnosis, after proving the absence of albumin in the urine by repeated examinations, it has been my habit of thought to exclude nephritis. And I must still further admit that microscopic examinations of the sediment of a non-albuminous urine have been made with the conviction that casts would not be found. In both the above cases it was the detection of the trace of albumin that confirmed my suspicions and fixed my attention fairly to the kidneys.

To show current medical opinion on this subject, I will quote from some of the most recent systematic writers:

Tyson: "In cirrhotic kidney the albumin is small in amount and may be temporarily absent, or it may be absent before a meal and present after it."

Loomis: "It is characteristic of this form of nephritis that albumin is sometimes present and sometimes absent."

Strumpel: "In rare but definitely attested cases it may happen that for a time, or even during the main part of the disease, the urine contains no albumin at all or only a trace of it. This is probably explained by the fact that the diseased glomeruli have wholly ceased secreting, and that therefore the urine is secreted only by the healthy portions of the kidney."

Osler: "Traces of albumin are found, but may be absent at times, particularly in the early morning urine. It is often simply a slight cloudiness, and may be apparent only with the more delicate tests."

Dickinson (Allbutt's System of Medicine): "Next, as to albumin: this averages much less than with the kidney of acute or subacute nephritis. The more uncomplicated the interstitial change, the less the albumin; when the kidney, in addition to having a granular surface, is large and congested, there may be scanty urine with a large proportion of albumin. The more atrophic the organ, the more abundant, as a rule, is the water, and the less the albumin. This may be only a trace, and that more apparent with nitric acid in the cold than with heat and acid. It is worth noting in especial that though the cardiovascular changes may be declared, and the fatal issue not very distant, it is possible that the urine may be absolutely free from albumin."

Of the significance of casts, this writer says: "In quiescent cases casts may be entirely absent. The less the tubes are involved, the more simply interstitial the disease, the fewer the casts. Their absence is a sign of little morbid activity, their relative abundance a measure of it. Renal diagnosis cannot be founded on casts alone, though they may be helpful to it."

Dr. McDonald maintains that in the pure red contracting kidney no albumin is passed, and that it is only under the influence of an intercurrent affection of the renal epithelium that the albumin makes its appearance.

Roberts: "The red granular kidney is accompanied by but a small amount of albumin in the urine, and even that may in rare cases be present only at certain times of the day. Absolute freedom from albumin, even for short intervals, is very rare; I am convinced that a considerable number of the cases so reported are examples of

imperfect testing. But it must be admitted that chronic degeneration of the kidneys, not distinguishable from some forms of Bright's disease, does exist, under certain circumstances, without albuminuria." Dr. Roberts details a case of post-scarlatinal nephritis, with characteristic general symptoms and the post-mortem existence of a "smooth white" kidney, in which during a period of four weeks' observation before death neither albumin nor casts could be detected.

Hamilton, of Edinburgh, observed two cases of scarlatinal dropsy without albuminuria.

Von Jaksch, a standard authority on clinical diagnosis: "In the course of a chronic or an acute nephritis it will often happen that albumin is found to be temporarily present in the urine. When this is so a careful microscopical examination of the fluid, at a time when it is *free from albumin*, will usually disclose the presence of formed material (casts and renal epithelium), by which the existence of a nephritis may be known. Such intermittent albuminuria belongs especially to contrated kidney. In a case of this disease, if the quantity of urine passed in twenty-four hours be collected together and examined, it will nearly always be found to contain albumin; but if the same urine be examined in separate portions at shorter intervals—say of one or two hours—it will be found comparatively often that that which is collected in the forenoon is devoid of albumin."

Simon, one of the most recent American writers on clinical diagnosis, says: "In chronic interstitial nephritis it is not unusual to meet with an apparent absence of albumin if the more common tests be employed. If it be remembered that very often the diagnosis of the disease is directly dependent upon the demonstration of the presence or absence of the albumin, the necessity of *frequent* examinations and the employment of more delicate tests, particularly of the trichloracetic acid test, as well as a microscopic examination, is at once apparent. This is of even more moment in the renal arteriosclerosses of Senator, in which albumin by the ordinary tests is probably not demonstrable in the majority of cases, and in which even the trichloracetic acid test *may* not be of service, and casts absent."

In discussing the pathology of cylindruria, this author says: "As far as the existence of a cylindruria *sine* albuminuria is concerned, the author must confess that he is very skeptical as to the actual occurrence of such a condition, and he fully agrees with Neubauer and Vogel when they state that whenever the number of tube-casts is minimal the corresponding amount of albumin may be so insignificant that it may not be demonstrable by means of the ordinary *coarser* tests. In several thousand examinations a true case of cylindruria *sine* albuminuria has never been observed by the writer."

Delafield (Twentieth Century Practice of Medicine): "The typical urine of chronic non-exudation nephritis is a urine increased in quantity, of a specific gravity of about 1010, containing a diminished quantity of urea, without albumin or casts, or with a trace of albumin and a very few casts. But exacerbations of the nephritis and changes in the circulation may for a time considerably increase the quantity of albumin and the number of casts. Very important modifications of the urine, however, are of ordinary occurrence.

"It is quite possible with nephritis of this type far advanced to have urine not below 1023 in specific gravity, and without albumin or casts. When one sees this urine during life and then the kidneys after death, it is difficult to understand how they can belong to each other. On the other hand, there are cases in which the specific gravity of the urine falls almost to 1000, either with or without waxy degeneration of the blood-vessels. In some cases the quantity of urine is very much increased — several quarts in the twenty-four hours. During the attacks of contraction of the arteries, to which these patients are liable, the urine may be diminished to a few ounces or even suppressed."

From the writings of these authorities it is shown:

1. That very rarely chronic parenchymatous nephritis has been observed in which albumin and casts have been absent from the urine for certain periods of time.

2. That chronic interstitial nephritis is characterized by a urine in which albumin and casts appear in smaller quantity, and that frequently both disappear for short or long periods of time.

3. That the appearance and disappearance of casts and albumin in nephritis are synchronous — in other words, that the pathological changes that cause albuminuria and cylindruria are identical. Simon particularly is emphatic on this point.

The journal literature of the last few years would seem to show that it is necessary to recast this generally accepted opinion of the relationship of albuminuria and cylindruria. Numerous cases of nephritis have been reported in which albumin has been absent from the urine, and in which a more or less abundant cylindruria has been continuous.

It is unnecessary here to cite these cases in detail, but they are too numerous and come from too good authority to be put aside, as Simon would put them, with the statement that albumin was not found because of imperfect or careless analysis.

In the two cases here reported I feel certain of the absence of albumin. In my routine urine analyses I habitually use several of the so-called more delicate tests for albumin, and am fairly familiar with the technique of their use.

While it is true that the pathological condition which determines the presence of albumin in the urine determines also the presence of casts, it must be admitted that exceptionally renal epithelial changes occur that produce cylindruria without albuminuria.

Among the most interesting of these articles are two papers by Dr. D. D. Stewart, one on the "Occurrence of a Form of Chronic Bright's Disease other than Typical Fibroid Kidney, without Albuminuria," read before the Pan-American Medical Congress, and the other supplemental to the first, published in the *Medical News* of April 14, 1894. In these articles Dr. Stewart reports a series of cases presenting a clinical history "typical of no distinct form of chronic nephritis, though their trend is suggestive of granular or cirrhotic kidney, or of the form described by Delafield as chronic diffuse nephritis without exudation."

Of the clinical and pathological characters of this distinct form of nephritis, Dr. Stewart writes: "What I especially desire to emphasize is that there certainly exists a class of cases, probably of common occurrence, with symptoms which place them in a group entirely distinct from what is known as chronic interstitial nephritis. In these the most aggravated symptoms of renal inadequacy may be present, such as are common only in an advanced stage of kidney disease, and yet albumin remains totally absent from the urine.

"That these cases have a pathology distinct from the so called arterio capillary fibroid kidney (the red granular or contracted kidney, or interstitial or catarrhal nephritis) I have no doubt; but the most exact post-mortem investigation into the character and distribution of the histologic change is necessary in cases which, dying, still preserve the usual symptom-grouping, in order to determine the actual differences.

"In cases of the sort that I have described, therefore, the exact pathologic footing must remain a matter of conjecture until a series of necropsies are obtained with death occurring before marked change in type is manifest, before generalized fibrosis has become evident, or albumin has appeared in the urine. This may be possible only after a period of years, but will be the earlier the greater the number of these cases that are recognized, collected, and followed. Light may only be thrown on the pathologic position of such cases through death from an intercurrent malady.

"It certainly seems logical that a group furnishing more or less prominently symptoms so distinctive and separable from those of the well-recognized forms of chronic nephritis has a distinct pathology. With an oliguria as persistent and as marked in certain cases as in the most outspoken type of chronic parenchymatous nephritis, and with a

urine as concentrated, yet with absence of cardiac debility and of dropsy to indicate its source, there occur as grave continuous symptoms of renal inadequacy—those, indeed, of pronounced uremia. These are associated, too, as in chronic parenchymatous nephritis, with as marked diminution in urinary solids, notably diminution in urea and mineral ingredients, indicating undoubted secretory involvement; yet totally unlike what is distinctive of parenchymatous nephritis, albumin is so persistently absent from the urine, even with the existence of the aggravated symptoms of renal incompetency, as to clearly indicate that its presence need form no part of the assemblage of symptoms or have any relation to the morbid condition."

To review my two case histories in the light of this added knowledge:

Case 2 presents a fairly typical history of chronic interstitial nephritis. I had examined the urine several times before the certain evidences of renal trouble were discovered, expecting to find this evidence, but had my attention turned from the kidneys by the continual absence of albumin. The casts were found in the centrifuged sediment, and it may be that the search for them in the previous analyses was not sufficiently careful.

This case shows the importance in the diagnosis of renal disease of the qualitative estimation of urinary solids in a series of twenty-four-hour specimens, and the most careful search for casts even when albumin is absent.

In connection with the cases of Dr. Stewart, Case 1 is of particular interest. Here the diagnosis was very puzzling. The recent development of the symptoms suggested an acute inflammatory or degenerative lesion, but the urinary findings were out of harmony with such a diagnosis. The absence of dropsy and other uniform phenomena negatives a chronic parenchymatous nephritis. The abundance of hyaline and granular casts, the renal epithelium, and the leucocytes were suggestive of this trouble, but albumin was wanting—symptoms not harmonizing with the diagnosis of cirrhotic kidney.

I was not familiar with the article of Dr. Stewart until this case history was written, so I was compelled reluctantly to make a diagnosis of cirrhotic kidney.

Another interesting feature of the case is the presence of profound uremic symptoms with a fair urea excretion. The lowest excretion was 124 grains. Dr. Stewart especially mentions the tendency to uremic symptoms in these cases, and it would seem not improbale that the epithelial structures implicated in the pathological process were those that have to do with the excretion of some uremic symptom-product or products other than urea.

CATGUT IN ABDOMINAL SURGERY.

BY E. COPELAND, M.D., MILWAUKEE, WISCONSIN.

My object in presenting this subject is to give my personal experience in the use of catgut as a material for sutures and ligatures. Each individual's experience may add some new truth to our knowledge of a subject. I have used catgut in general gynecological work for the last twelve years, and exclusively in all abdominal work for the last three years. I think that it meets all the requirements of an ideal suture and ligature. It has pliability, strength, sufficient endurance, can be rendered practically sterile, and, unlike nearly all other sutures and ligatures, is quickly absorbed after performing its work. It is preferable to any other animal suture or ligature for the following reasons: It can be procured in any size desired; is easily rendered aseptic; and on account of its cheapness. We should not use catgut unless we are sure we can do aseptic work, and are willing to give our personal attention to its preparation. Dr. R. T. Morris suggests that catgut be ordered by the American standard wire gauge; in this way it will always be uniform in size.

How to Render Catgut Aseptic.—Various methods have been proposed and tried to accomplish this end—juniper oil, chromic acid, corrosive sublimate, alcohol, cumol, formalin, dry heat, boiling in olive oil, etc. I shall not attempt a detailed account of the various methods, as they can be found in recent text-books and medical journals.

The method I have always employed is the only one that I shall mention—boiling the catgut in alcohol. I had employed this in a crude way for some time with a waste of much alcohol by evaporation, until I saw an article in the *Medical Record* of December 3, 1892, by Charles N. Dowd, in which he gives a description of a condenser to prevent the evaporation of the alcohol.

This condenser is made by encasing a coil of block-tin tubing in a cylinder of sheet copper. Two taps are inserted into the cylinder for the transmission of water in and out. The lower one is attached to a faucet of running water, and the upper one is fitted with a rubber tube to provide for the escape of the water. The crude catgut, as received from the dealer, is wound on glass spools and put into absolute alcohol in such an open-mouthed jar or bottle as is convenient. The piece of block-tin tubing at the bottom of the condenser is fitted into a perforation in the cork of this bottle or jar. The jar is then placed in a water-bath and boiled for one hour. This device is simply a still which recondenses the alcohol.

Alcohol alone has great germicidal power. Catgut boiled in absolute alcohol for one hour is, I believe, rendered sterile and increased in strength. Repeated boiling does not weaken the gut. My belief is based upon twelve years' experience with catgut, prepared after this method, without a single bad result that could possibly be attributed to the catgut. Some objection is made to the time and trouble required to prepare catgut after this method. No method could be quicker or easier after we have the apparatus; no more than five minutes is required to bring the alcohol to the boiling point.

The catgut used at Johns Hopkins was prepared after this method until they had three consecutive deaths from sepsis, which they attributed to the catgut, although no bacteriological test of the catgut used was made. In reviewing the report of these cases, as recorded in the *Johns Hopkins Hospital Bulletin*, it must have been by the process of exclusion that they arrived at their conclusions; the catgut was apparently made a scapegoat for the bad results.

Treatment of the Pedicle with Catgut.—There are two methods of treating the pedicle: first, ligating *en masse;* secondly, ligating each vessel separately. The common method, and the one which I have usually employed, is to ligate *en masse*, using the Staffordshire knot, reenforcing this by carrying the ends of the same ligature around the pedicle just back of the primary ligature. I always take this precaution in placing a ligature within the abdominal cavity, as there is a tendency for the catgut to untie. The only objection to this method is that adhesions sometimes take place at the end of the stump. To obviate this a second method has been suggested—that is, ligating each vessel separately and stitching the peritoneum over the end of the stump. This requires considerable more time than does the first method, and time enough has not yet elapsed since this procedure has been resorted to to prove that adhesions will not take place. My opinion is that nothing yet devised will prevent adhesions taking place in a certain proportion of cases.

Ventrofixation of the Uterus.—All cases of ventrofixation of the uterus have been done with catgut; about No. 6 gut is used for this purpose. The fixation-sutures are not carried through the skin, but are passed through the muscle and peritoneum at the lowest angle of the wound, then through the fundus of the uterus and out through the peritoneum and muscle on the opposite side, then tied and left as a buried suture. When the uterus and ovaries are normal and uncongested, or when the ovaries and tubes are removed, one suture only is used; but when the uterus is large and congested, as is often the case when it has been retroverted for some time, two sutures are inserted. I have watched carefully the cases where the ovaries and tubes were

not removed, as it is in such cases we are most apt to meet failure, and have yet to find a case where the uterus was not retained in position.

Closure of the Abdominal Incision.—In closing the abdominal wound the object to be attained is exact coaptation of the parts. The peritoneum is brought into apposition with a running suture of small size (No. o) and the aponeuroses and muscle are brought together after the following method: The first stitch is placed so as to bring the aponeuroses together; the next stitch includes both the aponeuroses and muscle; the stitch including the muscle is carried clear down to the peritoneum, each alternate stitch including only the aponeurosis; in this way we get perfect coaptation of the parts. The third continuous suture includes the layer of fat and skin; for this purpose we use a fine suture (No. 1), which experience has taught us answers all the purposes that a larger one does. This is placed as was the one in the muscle and aponeuroses. The first stitch includes the skin only; the second one includes the skin and fatty layer down to the aponeuroses, each alternate stitch including skin only, making perfect coaptation of the skin. Since using this method I have never failed to get perfect union. In my early work with catgut I did not use proper precaution in bringing the fatty layer together, and sometimes had oozing of a bloody serum from between the stitches. This was obviated by pursuing the above method. A wound that is not healed in from six to eight days is not going to heal by immediate union. The fine catgut used to bring the cutaneous surfaces together will last from eight to twelve days.

There is a good deal of skepticism among many operators as to the reliability of catgut as a suture for the aponeuroses and muscle, and other surgeons who use catgut for this purpose use silkworm-gut for the layer of fat and skin. My experience is that such skepticism is not valid, and that catgut meets every indication. The method at Johns Hopkins of using buried sutures of silver wire to close the aponeuroses is, to my mind, a step backward in surgery. Dr. Morris says that silkworm-gut is an instrument of the devil when used for buried sutures.

Advantages of Catgut.—The one great advantage of catgut is that it is absorbable and does not remain as a focus for subsequent infection. Tait, in speaking of his treatment of the broad ligament pedicle with silk ligatures, says: "Another accident which tells against the ligature is the occurrence of a number of cases (three or four per cent) in which the garroted stump and ligature get the better of the living tissue around them, prevent the tissues absorbing them, causing suppuration, and forming sinuses which do not heal but go on dis-

charging until the knot of thread is got rid of, months, it may be years, after the original operation. Sometimes the ligatures burrow into the sinuses of the broad ligament and are discharged into the rectum or bladder." The same charge has been brought against silkworm-gut and silver wire when used as a buried suture — "when they fail to become encysted they may come out months and years after in strange places." The patient is also saved the annoyance of having the sutures removed. The remote results, I am positive, are better than when a non-absorbable ligature or suture is used.

MORAL THERAPEUTICS.*

BY REV. J. J. PURCELL, M.A.,

Rector of St. John's (Episcopal) Church, Parsons, Kansas.

The medical profession has inscribed upon its roster some of the most illustrious names of the revered past. Beginning with the "divine" Æsculapias, and coming on down the ages, the student cannot but esteem the profession which includes the distinguished names of Hippocrates, Galen, Celsus, Trallianus, Galileo, Galvani, Farini, Rabelais, Schiller, Jenner, and Harvey. The generations in which they severally lived were indebted to them for their beneficent skill, whilst each succeeding age acknowledges not only their therapeutic worth, but their marked ability in literary thought and production, and their notable work as pioneers in scientific discovery. Some of them have left a heritage of valuable prose; others a rich treasury of pure and lofty poetry, full of moral excellence and grandeur; while still others have advanced scientific knowledge by their incessant labors and continued experiments. A profession honored by such names, notable in any age, cannot be other than illustrious in this.

If antiquity of origin and unbroken descent add luster to rank or profession, there is nothing of finite origin or continuity which should shine with clearer radiance than your chosen profession. Tradition has given to history that which antedates the historical. Out of this tradition have come accounts of human ills, human sufferings—the diseases of humanity—and also the accounts of man's efforts to alleviate or cure them. The drug is only preceded, in time, by the disease, and the attempts of professional skill by the patient's cry for aid. So buried in the unrecorded past is the origin of the practice of medicine that the ancients almost universally attribute its invention to the gods. All the early nations came into the light of history with their physi-

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cians, their sufferers, and their materia medica. Before the issuance of the most primitive book, the Babylonians, the Chaldeans, the Egyptians, and the Greeks suspended prescriptions on tablets in the temples of their gods. Hippocrates, who lived about 450 B. C., has left the earliest written system that has come down to us. Thus, out of the traditional arises the historical, and with unhalting tread it steps on every page which touches the pathological condition of men. As old as human suffering, as broad as the race, as unbroken as man's descent, so early, so continuous, so wide-spread has been the vocation of the physician. Apart from the religious, if indeed they are separable in early times, it is the oldest of the professions, illustrious in great names and thrice illustrious in noble endeavor and splendid achievements in the cause of humanity.

Except where specialized the medical practitioner has been both physician and surgeon, and as such he has always been a therapeutist. Even to-day, when surgery is almost distinct from the general practice of medicine, he who goes forth without a therapeutic knowledge is unequipped for surgical operations. It can, therefore, be safely said that therapeutics is the most inclusive department of the medical art. It presupposes an acquaintance with pharmacy, etiology, pathology, etc. The therapeutist is the physician with the invalid in his office, the doctor in the afflicted home, the hospital ward, the pestilence-stricken district, and the sanguinary field of battle. The therapeutist is the physician at work for the cure or alleviation of the manifold ills of the human system. He comes in the moment of pain, in the hour of excruciating torment, in *articulo mortis*, to ease the pathway to the grave. And who can tell how often he has been sunshine in gloom, mercy's messenger when hope seemed dead, a ministering angel when friend and foe had forsaken the sufferer! The time when patient and physician meet is often when hope and despair are fighting a hard battle. It is a life and death contest. The doctor knows this; his trained eye cannot be mistaken. The nurse, too, knows it, and friends barred from the presence of the invalid know it. Struggling life and the physician are closeted together. The doctor is an autocrat; he demands obedience to his directions. His sole reliance is on his therapeutic remedies—the administration of his prescriptions, the dosage of the patient. But death is written on the face and drugs will not revive the frame. Who is dying? Is it so much chemically arranged turnips, cabbages, and pork, and nothing besides, into a third thing called man? An animal only? If so, why let him linger and suffer and endure pains and sores and torment of body and anguish of mind? Why do you treat the matter in man differently from matter in a horse? You would in pity put the horse out of its misery; and

yet no pity will move the doctor, no, not even the pleading of distress unbearable will move the doctor to shorten the hours of man's agony. Drugs are useless, friends and clergy are either excluded or absent, and the occupants of the room, the ward, the battlefield, are the dying man and the doctor. Leaving out religion, excluding future rewards and punishments, what ought the physician to be in hours like these, freighted with the awful realities of death and destiny? Should he not be an inspiring moral force, a personality strong and brave and elevating, in the power of a manhood that speaks of goodness, and worth, and character—a character formed under the rule of obligation to what is honest, sober, and of good report? When drugs fail, must the therapeutist be a failure? In the art of medicine has the therapeutist no place as an anthropologist? It may be answered, "The case is extreme, admit the clergyman." But until the case becomes hopeless, the doctor has had the anthropos, the man, in mind, body, and soul. Is the extremity in sickness the time to admit the moral force? Might not the protracted influence of a moral power have had a sustaining, stimulating, therapeutic helpfulness, combining with and assisting the medicinal dosage to overcome the disease? Or is it the dictum of therapy to go to the grave's brink, and then turn the patient over to the priest?

Admitting that the foregoing is an extreme case, taken by way of illustration, does it not raise the question of the benefit to be derived from morals as a therapeutic agent in suffering? Is not immorality a prolific cause of ills and diseases? Immorality begins what, in untold cases, death finitely ends. Dirt, filth, impure air and water, shiftlessness, idleness, imperfections in dress, intemperance, gluttony, sensuality, overindulgence in otherwise lawful things—are these not ruinous of health and productive of premature decay and death? Immorality is the beginning of countless broken bodies, wrecked systems, stranded and hopeless lives. The mental, the moral, as well as the physical are involved. The whole man is sick. In the unity of the sufferer three parts are included. Medical therapeutics only touch the blood and tissue and nerve. What of the mind diseased? What of the moral nature sick nigh unto death? If the cause of the sickness is immorality, then there ought to be a moral effort at recovery. The patient needs a moral tonic. The whole man ought to be considered and treated. The effects are in the body, patent to the eye, but the mind is sick. It is manhood as well as man that is sick. The pulse and other physical signs indicate effects which can only be overcome by therapeutic treatment of the cause. The drug is necessary to the physical pathologic condition, but the disease is deeper seated. It is at the center and spring of manhood. The

disorder is moral, and the pathological condition of the patient should receive moral therapeutic treatment.

Drunkenness is not only a physical ill but also a moral infirmity. Attempts to build up the physical wreck of the inebriate are laudable, but alas, how vain! It must have a more deep-reaching treatment, otherwise the poor inebriate takes unto himself seven devils worse than the first. Until manhood makes him realize his own worth, the sacredness of the human being, until the will, the emperor of the moral, is fully aroused, all merely medical attempts at reformation will prove but patchwork, temporary and renewable at ever decreasing intervals.

At the basis of all that is pure and holy in the social fabric is the home. Poison it, and Adam and Eve have once more to leave their Edenic paradise. Wreck it, and the sea of life is strewn with the corpses of those who go to form the family, society, and the church. Marriage is the basis of the home, and nature is the mother of marriage. The wreck of home is an insult to wedlock, and an outrage on nature. And yet we are told that the home, the marriage relation, and nature receive the hardest blow in the house of their friends. Report is wide-spread that abortion, feticide, infanticide—the murder of the unborn offspring of wedlock—is so common that it ceases to attract attention. It is not for me to say if this is so, but if it is, it is simply appalling, immoral before man, murder before God. It is not necessary to dwell upon a crime, so evidently a crime—a crime blighting and blasting in its influence, a crime home-destroying, society-cursing, life-forfeiting in its effects; the crime which not only stamps the doctor as a dastard, but stains the mother's hand with the blood of her own child. It is unnatural, and nature is exacting, and no mother engages in it with impunity to her physical and moral nature, and no doctor who descends to it ever rises to the full measure of a man. It is immoral, and in this instance morality is a Shylock and will have its pound of flesh out of the mother's heart, and out of the doctor's measure of respect, if the gallows do not get every pound of his leprous body. It is a crime, and its perpetrators are criminals against the marriage, the home, society, nature, and God. Think of it! The perpetrators are a wife, otherwise pure and good until she becomes associated in crime with a low-rate doctor, who always afterward has an unholy hold upon her. It is, too, often the fact that the doctor admitted to perpetrate a crime is retained afterwards as a matter of protection from him or from gossips. The moral therapeutist is the advocate of the marriage relation, the preserver of life, the conservator of the home and society, and nature's assistant minister in the perils of childbirth. The immoral quack is a curse, a pestilence more to be dreaded than the fever, and more morally destructive than

legions of devils. He should have no standing among men and therapeutists.

Deception has played no small part in the practice of medicine. To such an extent did the ancients engage in it that it gave rise to ridicule and satire. Lucilius, writing of an unfortunate physician and his more unfortunate patient, says: "The patient dreamt that he saw his doctor, but awoke no more, although he wore an amulet." Trallianus, an eminent physician of his day, descended to the weakness of deception. For epilepsy he recommends a piece of old sail cloth, taken from a shipwrecked vessel, to be tied to the left arm seven weeks together. For colic he orders the heart of a lark to be fastened to the left thigh. For quartan ague a few hairs taken from a goat's chin are to be carried about. Several other equally ridiculous instances might be given. By way of excuse he informs us that in his time many persons, particularly the rich, were very averse to medicine, and would by no means be persuaded to persist in a proper method, which forced them, he says, to have recourse to amulets and such other things as were fondly imagined to effect a cure in a more expeditious manner.

What but a sneer could come to the face of the intelligent at such folly? It is not to be wondered at that it gave rise to the wit and satire of the educated. As one reads of the deception, there is no room for surprise that many rushed into therapeutic nihilism. The present age is too wise, the present civilization too free from superstition, too thoroughly conversant with the disease and drug and dosage, to treat with tolerance any practice so utterly irrational. So was Trallianus; so was Pliny, the writer and philosopher; so were thousands of the ancients. It was not considered either rational or scientific by them. They did it with an excuse. They eased their consciences by shifting the blame over on their patients. They came for bread, and the physician gave them a stone—an amulet, ship cloth, the heart of a lark, hair from a goat's chin. Now the patient comes for medicine and is given bread—bread pills, a mixture of flour and water and sugar, an almanac descriptive of a cure-all, the basis of which is alcohol, or opium, or bromides, whose deadliness is unnoticed by the soothing pathway it offers to a premature grave. The amulet is no more deceptive than the bread pill, and the immorality of the deception is measured by the same standard. The pill of bread is not food and it is not medicine; to palm it off as such is falsehood. It will accomplish no therapeutic benefit except as the individual is wrought upon by his own imagination. Ridicule the amulet and practice the bread pill! Will not the imagination work on the amulet on the breast with as much therapeutic benefit as upon a bread pill

in the stomach? Why satirize the deception of the past and practice equally glaring deception in the present? Are not the bread pill and the cure-all the highway leading to open doubt and final denial of the virtue of all therapeutic medicines? In my own experience I have a woman in mind whom a supposedly reputable doctor treated for months, if not for years. He treated her imagination with bread pills; he soothed her with sugar and flour; he took her money and conspired n her hallucination. The question is, Was this manly? Was it honest? Admit there are times when it is best to withhold the truth of the pathological condition; admit this and more — it in no wise makes it honest to practice deception on a mentally and morally afflicted human being. In the end this woman fell into the hands of drug nihilists, who told her the truth. They said: "You are not sick; your mental and moral nature are run down; all you need is to think differently, believe differently." This she did, and now she declares, "They cured me." And more: "I doctored with so and so and so and so for years. I paid out all the money my husband earned to the doctors; I tried nostrums, too, of every name, and all did me no good. I would be in my grave now if I had kept on. Now I am well, and it is through the treatment of medicinal nihilists."

This is not an exceptional case; there are thousands and tens of thousands almost exactly parallel, and every one of them is a medicinal nihilist. They are the advocates of vague theories, but no more vague than the theory which allows the physician to prostitute a noble profession to the treatment of the imagination with bread pills. In such cases deception is dishonest, and dishonesty is immoral. People accept the truth from medical nihilists; it will not, therefore, do to say they will not act upon it from the medical therapeutist. The deception puts a low estimate upon the moral worth of the patient, and the time will come when the patient will put a low estimate upon the doctor, and by inference upon all medical doctors. The deception is an acted falsehood, and the money so received is accepted under false pretenses. The whole transaction is immoral, ruinous of self-respect on both sides, and destructive of what ought to be one of the noblest professions of mankind. If the truth would not answer better, then there might be a trifling palliation; but it does, as the ranks of medical nihilists attest in no uncertain way. Why cannot morality have a therapeutic benefit with the medical practitioner as well as with his most avowed enemy? There is no doubt but he is doubly armed who carries nature's remedies and nature's manliness into the presence of the invalid, real or imaginary. But therapeutists should never merge the physician into the deceiver, or the doctor ever forget what he owes to himself as a man. Yes, he should ever remember

that he is a man before men; ailing though they be, they are men, women, and that the greatest force among men is the moral force. Truth is mighty and it will prevail.

He may not always think it best to tell all he knows, to give expression to his hopes and fears; he has the power to reserve his opinion, but not the moral right to speak or to do evil with the expectation that good may come. No man, no woman, in health or in sickness, can be improved by a direct or implied lowering of his moral manhood or womanhood. On the contrary, the physician can be aided as in no other way by moral force appealing to the moral intelligence, and the moral qualities of the human heart. Moral patriotism with flickering breath cries out, "Don't give up the ship!" Moral heroism fires at the enemy as the soldier lies wounded in the trenches, and moral manhood, sick though it be, gives voice to the feeling of obligation: "While there is life there is hope, and while there is hope of victory I will not give up life; I am morally bound to live if I can." In sickness the moral might of the moral nature, being aroused from its lethargic sleep, will quicken the pulse, warm the heart, inspire the soul, and assist the therapeutist, in many cases, to successful and permanent cures.

ACCORDING to the *British Medical Journal*, on June 27, in the presence of a number of official, academic, and scientific notabilities, Professor Virchow formally opened the new pathological museum which bears his name, and which has been built under his superintendence. It has cost about 560,000 marks, and contains a collection of more than 20,000 specimens, collected almost wholly by Professor Virchow himself, and representing the history of pathology during the past half century. Professor Virchow delivered a speech in which he pointed out that while foreign countries, especially England, had long preceded Germany in anatomical researches, the Fatherland could now rival them on that ground.

AN unusually large number of cases of tetanus, with many deaths, have lately been reported in New York City and vicinity, most of them the result of pistol-shot wounds of the hand during the recent 4th of July celebration. Several of the cases received intracerebral injections of tetanus antitoxin, and in each case the serum had an immediate effect on the symptoms, tending to show that it would have proved curative if it could have been resorted to before the infection had advanced too far. There have also been reported in Pennsylvania, since the 4th of July, thirteen cases of tetanus, of which eleven have already resulted fatally. In nine cases tetanus arose from lacerated wounds of the hands, and four from gunshot wounds.

CORRESPONDENCE.

NO EVIDENCE OF LEPROSY ON PRE-COLUMBIAN CLAY VESSELS.

To the Editor of THE MEDICAL AGE:

SIR—Will you kindly publish for the enlightenment of Mr. Chew, M.D., C.W., M.S.C., etc., of Darkest India, that Dr. Ashmead has never in any of his writings claimed that the deformations apparent on anthropomorphous huacos pottery represent leprosy? On the contrary, in every one of his writings he has claimed that they represent syphilis (*bubos*), or lupus (*uta*, *espundia*, *elaga*). Only Dr. Virchow sees leprosy. Other physicians and anthropologists the world over corroborate Dr. Ashmead's authority. Brinton of Philadelphia, Polokowsky of Berlin, Glück of Sarejivo (Bosnia), Sommer of Buenos Ayres, Valdez-Morel of Santiago (Chili), Lehmann-Nitsche, of the Museum de la Plata, Argentina, Vicente Restrepo and Carrasquilla of Colombia, believe that the mutilations are artificial or due to another disease (syphilis, lupus, etc.).

ALBERT S. ASHMEAD, M.D.

ACCORDING to the *Scientific American*, the Italian observers, Grassi, Bastianelli, and Bignami, who are associated in carrying out a series of investigations at the hospital of Santo Spirito, with the object of throwing light upon the etiology of malarial fever, have again met with success in their inoculation experiments with mosquitoes. On this occasion only one species of these insects was employed in the experiment, namely, *Anopheles claviger*, captured as before in the adult stage in the malarious region about Maccarese. The subject of the experiment was a young man who had never suffered from malarial fever, and who was received into the hospital of Santo Spirito for hysteria about four years ago, since which time he has been constantly under observation and has had no kind of fever whatever. This man for nineteen days slept in a room in which were set at liberty from time to time numerous specimens of *Anopheles claviger*. On December 2 (eighteenth day) he began to feel unwell, and on December 3 the blood on examination was found to contain the parasites of malarial fever, exclusively of the common tertiary type (the spring tertian of Italian writers). This form of fever is prevalent at Maccarese. Considerable difficulty is experienced in continuing these experiments on account of many of the mosquitoes dying and others refusing to feed. This is probably due to the lateness of the season.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

BAPTISM DISEASE.

From the remarks of a writer in *Le Progrès Médical* of recent date it would seem that in France they suffer more than elsewhere from that unfortunate tendency to obscure medical terminology by appending personal names to newly-discovered diseases and newly-invented instruments. The writer alluded to treats this tendency as a positive malady, and designates it "baptism disease." The symptoms of this disease, he maintains, are generally cerebral ones, and the patient—usually a physician—is seized with an irresistible impulse to discover some disease and baptize it with his own name. The causes of the disease are not numerous, but very active. The subject experiences an immoderate desire to diffuse his name throughout the scientific world. In doing this financial considerations are not the primary incentives, though, of course, it is natural that an individual attacked by Spitzbube disease would like to consult Spitzbube himself, so the name-giver obtains some of the benefits. The differential diagnosis of the disease is extremely difficult, as discrimination must be made between those who consciously give their names to instruments and diseases, and those to whose discoveries the medical profession have affixed the names of their protégés. Paquelin's cautery and Potain's aspirator and the needle of somebody else might be taken as illustrating this difficulty of differential diagnosis.

Among the conscientious savants who escaped this malady must be mentioned the immortal Pasteur, who, seeing that no particular use would come from calling microbes by his own name, and distrusting his own knowledge of Greek, asked Littré to suggest one. The great lexicographer suggested the term "microbe," which he considered euphonious, and to which he subsequently accorded philologic recognition. Microbes, however, did not entirely elude the vagaries of

baptism. The streptococcus and the gonococcus won their place in literature honestly and by their own efforts, but the colon bacillus endeavored to show its disputed parentage by calling itself Eberth's bacillus and Nicolaier's bacillus. It must be said for them, however, that they do not abuse these titles to nobility. The odorous bacillus of ozena has distinguished itself by the title bacillus of Lewenberg, though Nasenberg would have been more characteristic and felicitous. Exophthalmic goitre is a disease of very aggravated paternity. Some call it by the name of Basedow, and others by the name of Graves. Observing the propensity of goitre to collect proper names around it, one will not be surprised to learn that the operation of exothyropexy should really be called the operation of Gangolphe-Jaboulay-Poncet.

The manner in which these names come to be applied is very various. For instance, Professor Jolinon, at the end of a brilliant clinical lecture, designates one particular sign whereby he is able to differentiate infantile pneumonia from senile gangrene, and his admiring students immediately dub this "Jolinon's sign." This habit has prevailed to such an extent that medical nomenclature is now encumbered with such terms as the signs of Rosenbach, Koplik, Kernig, Olivier, Philippowiez, Stellway, and Babinski. We are stupefied by hearing of the symptoms of Millard-Gubler, Weber, and Wichmann, and we are paralyzed by learning of such diseases as those of Cherchewski, Barlow, Stoker-Cadam, and Rougnon-Heberden. Not one of these fervid name-givers has so far bestowed his name upon syphilis. Diday maintained that Job was syphilitic, but the term "Job's disease" has not prevailed. During the famous outbreak of syphilis in the fifteenth century everybody endeavored to connect the disease with his next-door neighbor. It was called the Spanish disease, the French disease, and the Neapolitan disease. Some wished to connect it with the new world and call it the American disease, but Amerigo Vespucci protested. "If you wish," he said, "to give my name to something I have not discovered, give it to the West Indies." So America was called by his name, first, doubtless, by some one suffering from baptism disease.

In conclusion, the writer asks pity from those who invent forceps and bistouries and those who cultivate microbes. He asks pity for the students who cannot comprehend the significance of these various terms, for the practitioner who cannot return to school to learn them, and for the patient who does not want "apocalyptic neologisms," but active treatment. He urges a return to a simple and exact scientific terminology, and asks that in naming new discoveries there shall be displayed more modesty and less personal vanity.

EDITORIAL NOTES.

Railway Accidents.

The government report on railway accidents for the year is an interesting document. The total number of casualties during the year ending June 30, 1898, was 47,741. The aggregate number of persons killed as a result of railway accidents during the year was 6859, and the number injured was 40,882.

The casualties from coupling and uncoupling cars are assigned as follows: Trainmen, killed 182, injured 5290; switchmen, flagmen, and watchmen, killed 90, injured 1486; other employees, killed 7, injured 212. The casualties resulting from falling from trains and engines are assigned as follows: Trainmen, killed 356, injured 2979; switchmen, flagmen, and watchmen, killed 50, injured 359; other employees, killed 67, injured 521. The casualties to the same three groups of employees caused by collisions and derailments were as follows: Trainmen, killed 262, injured 1367; switchmen, flagmen, and watchmen, killed 13, injured 69; other employees, killed 38, injured 367.

The number of passengers killed during the year was 221, and the number injured was 2945. Corresponding figures for the previous year were 222 killed and 2795 injured. In consequence of collisions and derailments 72 passengers were killed and 1134 passengers were injured during the year embraced by this report. The total number of persons other than employees and passengers killed was 4680; injured 6176. These figures include casualties to persons classed as trespassers, of whom 4063 were killed and 4749 were injured. The summaries containing the ratio of casualties show that one out of every 447 employees was killed, and one out of every 28 employees was injured. With reference to trainmen—including in the term enginemen, firemen, conductors, and other trainmen—it is shown that one was killed for every 150 employed, and one was injured for every 11 employed. One passenger was killed for every 2,267,270 carried, and one injured for every 170,141 carried. Ratios based upon the number of miles traveled, however, show that 60,542,670 passenger-miles were accomplished for each passenger killed, and 4,543,270 passenger-miles accomplished for each passenger injured.

The Injuriousness of Artificial Teeth.

Dr. Simpson, a Boston physician, evidently does not believe in the Italian proverb, "God gives nuts to those that have no teeth." He maintains that artificial teeth are unhealthful, primarily because they enable elderly people to eat meat and other things not good for those who naturally have no teeth. The teeth, he maintains, fall out at a certain period because nature intended that at this time of life a vegetable diet should prevail. This being so, artificial teeth become a source of danger to the welfare of the organism.

ITEMS AND NOTES.

THE Laval University of Montreal is about to found a chair of pathology.

THERE is a very sensible reaction in Germany against overwork in the schools.

HARVARD MEDICAL SCHOOL has just received $400,000 from the Ellis family of Boston.

ZUCKERKANDL has succeeded Puschmann as dean of the medical faculty of the University of Vienna.

IN the rebuilding of the Charité Hospital at Berlin, the pathologic museum has been completed and named after Professor Virchow.

LORD SALISBURY, the English Premier, is a chemist, and from his laboratory it is said an important chemical discovery is shortly to be announced.

IN thirty years the annual number of cases of insanity in Paris has increased from 7805 to 21,700. The cause in twenty-five per cent of these cases is alcoholism.

AN outbreak of malarial fever is reported to have occurred at The Hague, among the victims, according to the reports, being several members of the Peace Conference.

DR. KEVILE, of Baltimore, has found diphtheria markedly prevalent among pigeons, and cases have been reported where the disease has been communicated by them to men.

THE Ameer of Afghanistan has secured the services of a Russian woman, Miss Termoshova, a graduate of the University of St. Petersburg, as physician to his wives and children.

A MAN in Philadelphia, says an exchange, has been awarded $1500 damages for an attack of typhoid attributed to contamination of his water-supply by the overflow from a sewer left uncompleted by the city.

A CHICAGO man has invented a guard which can be carried in the pocket and slipped on any drinking-glass, thus affording protection from infection when traveling or whenever a public drinking utensil is used.

THROUGH the action of the naval personnel bill passed by the last Congress, Dr. Van Reypen, the surgeon-general of the navy, in common with the other bureau chiefs, receives the rank and pay of a rear admiral.

THE widow of the late Dr. A. A. Kanthack, professor of pathology of Cambridge (England) University, has just been granted a pension of $300 a year, "in consideration of the eminent services rendered to science by her late husband."

THE ideal symbol of faith, observes an exchange, is not the traditional maiden clinging to the Rock of Ages, but the bald-headed man confidently consulting the bald-headed specialist, and looking forward with enthusiasm to a great growth.

ON the theory that plenty of exercise, by walking, is good for consumptives, the trustees of the Cincinnati City Hospital have had constructed a board walk a mile long within the hospital grounds as a promenade for consumptive patients.

SUIT has been entered against the city of Baltimore for $5000 for injurious effects resulting from compulsory vaccination. The plaintiff is a young woman, who claims that she was made ill by the operation and rendered unfit to attend to her duties.

THE total number of students registered in the University of Vienna during the winter semester recently ended was 6697. Of these 1382 were ordinary and 260 extraordinary students for medicine. There were, besides, 654 entered for special courses, of whom 102 were Americans.

A NEUROLOGICAL society was organized in Paris on June 8. It has adopted as one of its by-laws that no member shall present a paper which will require more than fifteen minutes in its delivery, or occupy more than one page of the official organ in print. The official organ will be the *Revue Neurologique*, which will be issued on the fifteenth of each month.

THE Senatus Academicus of the Clark University, Worcester, Massachusetts, which is about to commemorate the anniversary of its foundation, has invited Prof. Angelo Mosso, the eminent Italian physiologist and man of letters, to deliver a lecture on a subject specially chosen for the occasion and dealing with a scientific problem of present and universal interest. Professor Mosso has chosen for his subject "The Psychic Process and Movement."

ACCORDING to *L'Écho Médical* of July 2, 1899, Marguerite Boyenval, the celebrated sleeping woman at Thenelles, France, recently entered her seventeenth year of continuous slumber, the most curious case of lethargy ever scientifically observed. Now thirty-five years of age, her pallor and emaciation are extreme, although the pulse-beat is over 80. The skin is without sensation, and the arm, if lifted, remains in the air. The only nourishment is by occasional rectal injection.

PROFESSOR PATRICK, of Chicago, after a series of observations and comparative experiments relating to the confusion between tastes and odors, suggests in a recent paper that a great economy in household expenses might be accomplished by merely blindfolding the family before sitting down to table. If the influences of smell were removed by some contrivance at the same time, most of the savory dishes and drinks now so popular could be replaced by the simplest and cheapest materials.

THE Dreyfus affair has been the occasion of serious disturbances in the medical school at Lyons. Professor Augagneur had taken an active part in manifestations in favor of Captain Dreyfus and President Loubet, and the students attending his lectures had expressed their sympathy with him in this line of conduct. The next day the Professor's lecture-room was invaded by a mob of persons, for the most part not belonging to the school, who made such an uproar that it was impossible for him to lecture.

ACCORDING to the *Journal of the American Medical Association*, the total expense of Pozzi's new gynecologic pavilion at Paris, with its sixty-six beds, amounted to $88,000. The pavilion is like an art gallery, set down among the buildings of the Broca Hospital, of which it forms a part, as the walls were richly decorated with frescoed landscapes, etc., by some of the foremost artists of the day, at Pozzi's appeal. Other special features are an arrangement for "permanent baths," another for vaginal flushings with sixty liters of water, and a lay committee to care for convalescents after dismissal.

AT a recent meeting in New York City, called by the Medical and Legal Relief Society, a rough draft of a bill designed to protect the public from the interference of "Christian Scientists" in the care of the sick was presented. The bill provided that whoever advises or persuades another against employing medical or surgical aid in cases of illness or injury will be guilty of a misdemeanor, and if such illness or injury result fatally, shall be guilty of manslaughter, provided no

medical or surgical aid has been received by the patient. The bill was referred to a committee of nine, appointed by the President of the Society.

At the last meeting of the Zoological Society of London Dr. Woods Hutchinson read a paper on "The Zoological Distribution of Tuberculosis," founded mainly on observations made in the Society's gardens. Of 215 necropsies made in the prosector's room during the past six months forty-nine, or 25.3 per cent, of the mammals and birds presented the lesions of tuberculosis. This mortality fell most heavily upon the ruminants and gallinæ, and least so upon the carnivores and raptores. Race or family appeared to exert little influence upon susceptibility, mode of housing only a small amount, and food and food habits much more. A close correspondence appeared to exist between immunity and the relative size of the heart both in birds and mammals.

According to the *British Medical Journal* the pope is evidently a patient whose gratitude does not evaporate with the sunshine of restored health. Not long ago he conferred on Dr. Gaetano Mazzoni, who successfully operated upon him, the Grand Cross of the Order of St. Gregory, with a special brief expressing his sense of the skill of his surgeon. Now it is announced that his holiness has sent a full-length portrait of himself with a dedication and signature to Dr. Mazzoni, and has appointed him his consulting surgeon. Dr. Mazzoni is a *libero docente* of surgery and surgical pathology in the University of Rome. In addition to contributions to surgical literature, he is the author of a book on the history of the Red Cross movement, for which King Umberto conferred on him the order of Saints Maurice and Lazarus.

The Paris correspondent of *The Lancet* states that a Parisian who was lately traveling by train refused to show his ticket to a traveling inspector of the company. The passenger was accordingly summoned by the company for refusing to show his ticket, as he was bound to do by law. He argued, however, that he had not refused to show it, that he had let the inspector see it so that he could easily satisfy himself as to its being in order, but that he certainly had refused to let the inspector take it into his hands because his hands were so dirty. He, the passenger, therefore was unwilling to put into his pocket a ticket which would be contaminated with microbes and might very likely give him some disease. After a long legal discussion as to the exact meaning of the word "show," the court fined the ardent disciple of modern hygiene the sum of one franc.

NEW PUBLICATIONS.

PRACTICAL DIAGNOSIS.

The fact that the present is the fourth edition of Dr. Hare's valuable work is itself a convincing indication of the popularity and utility of this book. The object of the volume is to aid the physician in the matter of medical diagnosis. To do this the symptoms used in diagnosis are discussed, and their application in determining the character of the disease follows. Thus, if a patient be vomiting, in the chapter on Vomiting may be found its diagnostic significance indicated, the various causes to which it may be due enumerated, and the differentiation of each form of this affection from another made manifest. It is, of course, a rational method of reasoning from effect to cause. The work is illustrated with 205 engravings and fourteen colored plates. The present volume is bound in an attractive way. The work is one which will continue to be in demand by the general practitioner, and there is little doubt that its speedy march to popularity can only be accounted for by the fact that it fills an actual want.

Practical Diagnosis. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M.D., B.Sc., etc. Fourth Edition, Revised and Enlarged. Illustrated with 205 Engravings and 14 Colored Plates. Philadelphia and New York: Lea Brothers & Co., 1899.

LEGAL DECISIONS MEDICAL.

The large number of cases in which the jurisprudence of medicine is concerned has multiplied so much of late years that some method of epitomizing the decisions reached has become a matter of necessity. The publishers of the International Medical Annual have therefore thought it worth while to issue their review of legal decisions medical during the past year as a separate volume, adding to it a convenient brief of law points that usually arise in the prosecution of unlicensed practitioners. They have also added a chapter upon Manslaughter, Christian Scientists, and the Law, which the increasing number of so-called Christian Scientists and the prevalent ignorance of what the theories of this cult are has made most urgent. This little work is one of considerable value, providing in convenient form information which is otherwise somewhat inaccessible.

A Review of Recent Legal Decisions Affecting Physicians, Dentists, Druggists, and the Public Health. Together with a Brief for the Prosecution of Unlicensed Practitioners of Medicine, Dentistry, etc. By W. A. Purrington, of the New York Bar, etc. New York: E. B. Treat & Company, 1899.

ELECTRO-HEMOSTASIS.

The high repute of the author of this work in the field of operative gynecology lends additional importance to his advocacy of new surgical expedients. Dr. Skene appears convinced of the important part electro-cautery and electrolysis should play in surgery. He advocates the employment of electro-hemostasis in a variety of conditions, among these in ovario-salpingectomy and in the cauterization of the pedicle in appendectomy. The author is sufficiently convinced of the value of the principles involved in electro-hemostasis to appear as an aggressive or even revolutionary advocate of the methods recommended.

Electro-Hemostasis in Operative Surgery. By Alexander J. C. Skene, M.D., LL.D., etc. New York: D. Appleton & Company, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Lumbar Puncture in Children.

Pfaundler (*Jahrb. f. Kinderheilkunde*, March, 1899; *Medical Review of Reviews*, June 25, 1899) says that the utility of the puncture is twofold, viz., diagnostic and therapeutic. With regard to diagnosis the first matter to determine is the subarachnoid pressure. This is a complex subject, and according to Pfaundler the total pressure may be decomposed into three elements, viz., elastic pressure, hydrostatic pressure, and transmitted vascular pressure.

With regard to the therapy of lumbar puncture, there are three indications: (1) to relieve intracranial pressure; (2) to remove many symptoms of intracranial pressure or irritation, such as convulsions, delirium, and headache; (3) to drain away virulent bacteria, poisonous substances, etc., and thereby remove the cause of the disease. Cures of epidemic cerebrospinal meningitis have doubtless been wrought in this manner.

With regard to the safety of the puncture, the author had no accidents in his 200 cases, and believes that the operation is perfectly safe.

Hypospadias.

Walz (*Deutsche Med. Woch.*, 1899, No. 19) reports a case of hypospadias. He resorted to a number of operations according to the methods of Thiersch and Duplay, and used largely of the prepuce in the formation of a urethra. After the whole of the urethra was made it was connected with the healthy opening. The penis remained long enough so that the nine-year-old patient could void his urine with a good stream. The urethra was joined over glass bougies at the juncture of the new urethra with the healthy end. A Nélaton catheter was used.

Treatment of Soft Chancre by Means of Steam.

E. K. Manfawovsky (*Vratch; Journal of Cutaneous and Genito-Urinary Diseases*, July, 1899) says in eighty-nine cases of chancre the diagnosis was made clinically, not by demonstration of the Ducrey bacillus. Among them, twenty were accompanied with buboes and one with necrosis. The localization was on different parts of the penis. The author placed the end of Professor Shegirer's steam apparatus at a distance of four to eight centimeters and subjected the

sore to the action of the escaping steam (50° to 60° C.) for three to ten minutes. The surrounding healthy tissues were protected by means of gauze. After from one to two minutes the floor and the edges of the sore under the influence of the steam became pale, then rose-like in color. Later, after three to four sittings, the sore begins to bleed, and takes on a healthy appearance. A complete cure was obtained by the author after ten to fifteen sittings.

The Tendency in Some Syphilitic Families for Certain Organs and Tissues to be Specially Affected.

John Thomson (*Scottish Medical and Surgical Journal*, Jan. 1, 1899) gives the histories of four families illustrating this tendency. In the first there were seven births and no miscarriages. Six children were syphilitic, four showing extensive choroidal and retinal changes. In the second family three children developed epiphysitis, the fourth having no symptoms. In the third, two of twelve children who survived birth were deaf. In the last family of ten, five showed no sign of disease, three died early in life, and two suffered severely from periostitic swellings in both extremities. The author draws attention to the extreme meagerness of the literature on this point and to the difficulties attending investigation, because of the mortality among syphilitic children, and because frequently snuffles and rash are the only symptoms ever present.

Arthritis Deformans.

Arthritis deformans is an affection seldom occurring in childhood. Spitzy (*Jahrbuch f. Kinderheilkunde*, Bd. 49, Heft 283) saw a case in a three-year-old girl convalescing from influenza. It occurred as the picture of an acute rheumatic affection of the joints, became chronic, and attacked during the year nearly all the joints of the body. At last the trouble became localized in the large joints of the lower extremities, and resulted in typical arthritis deformans. Tuberculosis and syphilis were absent.

Surgical Treatment of Pulmonary Tuberculosis.

Turban, of Davos, has contributed to the *Berliner Klinische Wochenschrift* (1899, No. 21) an article of interest on the above subject. He says there are cases of tuberculosis which give the appearance of being ready to undergo cicatrization and shrinking, were it not that the inflexible wall of the strongly built thorax prevents any drawing in of the framework. Turban for such cases would recommend a resection of the ribs of considerable area to enable the thorax to settle

inward, giving, he claims, a thorax of sufficient resistance with a firm wall tending to retract as cicatrization occurs.

The author describes one case on which he performed two operations to this end, twice reducing the thorax by extensive resections of the ribs in a man twenty-one years of age with cavities. The patient is now (two years after the operation) living in good health.

MEDICINE.

The Possibility of Extirpating Malaria from Certain Localities by a New Method.

Major Ronald Ross (*British Medical Journal*, July 1, 1899), in his inaugural lecture at the Liverpool School of Tropical Medicine, said there seemed to him a possibility of being able to check, perhaps even to extirpate, malaria in some localities by the extermination of those species of mosquito which carry the disease in that locality. We can never, said Dr. Ross, hope to exterminate them by catching and killing them individually. But fortunately there is a very vulnerable stage in their career, before they reach their winged condition—that is, when they are water insects, the little wriggling larvæ found in pots and tubs of water, and in stagnant puddles. These larvæ take about a week to mature in the water. When mature they rise to the surface and become the adult winged insect, and fly away. The females feed on men, cattle, or birds, and can live for weeks or even months, laying eggs a few days after each meal. Now it is hopeless to attempt their destruction when they are winged, but our knowledge of their life-history leads us to suppose that if we could make arrangements to empty out once a week all the tubs of water, the ditches, puddles, and wells within a given area, we should be able to exterminate the larvæ within that area, at least for a time—and therefore also we should be able to exterminate, at least to a great extent, the adult mosquitoes.

Fortunately, in order to extirpate malaria, it will not be necessary to declare war against all mosquitoes in general. We already know for a fact that only certain species can carry the disease. If it prove to be the case, as I think it may prove, that these particular species can breed only in a few isolated collections of water, then we may expect to find ourselves in possession of a cheap and effective means of extirpating malaria, at least from the more civilized and therefore the more important areas.

In concluding his address the speaker made the following statements, which he said had a particular bearing on the question:

(*a*) We can detect the dangerous species of mosquitoes in a given locality by a perfectly certain method, namely, by ascertaining according to Manson's induction whether the parasites of malaria will live in them or not. (*b*) We can detect their breeding grounds by searching for their larvæ. If the dangerous mosquitoes prove to be confined to the genus Anopheles, the problem will be much simplified, and it will be advisable to declare war against the whole genus. The larvæ of this genus can be distinguished by any intelligent European by the fact that they float flat on the surface of the water, and the adults can be generally distinguished by their having spotted wings. (*c*) In order to obliterate pools which breed dangerous mosquitoes, they must be filled up or drained away. Mosquitoes scarcely ever breed in large bodies of water, because these contain fish. To kill larvæ in wells some appropriate drug must be sought for, but he thinks it unlikely that malaria-breeding insects often inhabit wells.

Contagion from a Historical Point of View.

Miall (*Medical Press and Circular*, May 17, 1899) contributed a very interesting paper on this subject. He said: "Disease was considered transmissible, in very early times, by charms and ceremonies, some of which are still extant. Ideas of cleanness and uncleanness, which are almost universal among primitive people, also involved the idea of contagion which prevailed at the dawn of history in Egypt, Persia, and Greece. In India inoculation for the smallpox was practiced by the priests still earlier. Thucydides records the contagious character of the plague at Athens, B. C. 430, and about the same time Hermippus, the comic poet, mentions the itch as transmissible. A little later Isocrates alludes to consumption as contagious, and Aristotle has no doubt of the contagious nature of the plague. But the strictly medical writers in Greece before the Christian era ignore contagion. They account for epidemics by noxious airs, influences of celestial bodies, eclipses, tidal waves, earthquakes, famine, wars, and other causes affecting many at the same time. The Greeks had no word for contagion, but they expressed the fact in numberless ways, quite unequivocally. Aretæus was the first medical author who recognized contagion at all; this was in the second century A. D. Lucretius first uses the term contagion, which soon acquired a technical meaning. He was followed by Virgil, Ovid, Livy, and most Latin authors, except the medical writers. The latter do not allude to the subject till we come to Cœlius Aurelianus, though the Greeks had long adopted the notion. Bubonic plague can be traced back further than any epidemic disease; it is now possible to identify it in the sixth century A. D.,

when it pervaded the Roman Empire, eastern and western, for fifty years. According to Gibbon, it depopulated the most flourishing countries, some of which have never recovered. In three months five to ten thousand persons died daily at Constantinople. At this time Mayrius looks upon it as decidedly contagious, while Procopius, another contemporary historian, denies contagion in strong terms. For a thousand years after this the same disease appeared at intervals in every country in Europe. The recognition of smallpox by Rhazes in the tenth century was an important event in the history of epidemics, for though the disease had probably appeared long before, it was not properly marked off by physicians. From that time measles, chicken-pox, and ultimately scarlet fever, typhus, and enteric fever, were gradually analyzed and separated from one another. The belief in contagion was gradually placed on a firmer foundation."

Massage and Galvanism in Gout.

In the *Boston Medical and Surgical Journal* of June 1, 1899, Dr. D. Graham calls attention to this mode of treatment. A man, aged fifty-one years, had been reduced in weight from 325 pounds to about 200 pounds, and was confined for three weeks to his room with gout. The outer aspect of the left ankle was swollen, hot, tender, and indurated; the left wrist was similarly affected. The foot and hand were edematous. Previous attacks extended over a period of twenty-eight years and were characterized by heat, pain, and swelling of the metatarso-phalangeal joint of the left great toe. General massage was performed in the morning and special massage of the affected joints in the afternoon for five days, when he was evidently improving. On the fifth day after the massage of the swollen parts galvanism, five to ten milliamperes, was applied with the negative pole over the affected region for a few minutes. The effect was at once evident in the lessening of the induration and the dispelling of the edema and congestion; the galvanism being followed by a few minutes' massage to hasten absorption, the result was much better. This treatment was continued every day, and on the seventh day (two days after beginning galvanism) the patient was taking steps without crutches, and two days later was walking. When the treatment was begun the usual remedies had been exhausted.

Observations on Imperfectly Developed Vaccine Vesicles.

On June 20 M. Hervieux read at the Paris Academy of Medicine (*Lancet*, July 1, 1899) a report based on certain observations made by M. Carteret, of the army medical service, these observations being to

the effect that so-called imperfect vaccination does not altogether deserve this description. The observations consisted in collecting from a certain number of soldiers the liquid which has hitherto been considered as derived from unsuccessful vaccination and in vaccinating a heifer with it; a second heifer was then vaccinated with the lymph from the first one, in order to ascertain whether in its transmission the lymph had preserved all its activity. The lymph obtained from the second heifer was used for the vaccination of infants and adults. In this way it was proved that the lymph taken from the eruption of imperfect vaccination had regained all its active qualities. The so-called imperfect vaccination is therefore not, strictly speaking, unsuccessful, since notwithstanding its incomplete development it can confer immunity on a susceptible subject.

A Case of Leucemia.

A case of acute leucemia in a poorly developed girl of sixteen years was observed by J. Guinan (*Berliner Klin. Woch.*, No. 26, 1899). The attack was accompanied with fever, pain, anemia, vomiting. After being ill for thirty-five days the patient came to the hospital with signs of pronounced anemia. A slight enlargement of the liver and pancreas was found. There occurred bleeding from the nose and the mucous membrane of the mouth, and some from other organs. The patient died on the fortieth day of her sickness. The blood showed the usual typical changes, lessening of the number of corpuscles and of the hemoglobin, a great increase of the small and a lessening of the large lymphocytes, also an increase in the number of polynuclear cells. Autopsy revealed the liver, pancreas, and lymph glands to be greatly swollen.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

The Cultivation of the Bacillus Lepræ.

At a recent meeting of the National Academy of Medicine of Bogota (*British Medical Journal*, July 1, 1899) Dr. Carrasquilla asserted that he had successfully cultivated the bacillus lepræ on sloped solidified human serum and on beef bouillon prepared according to the method of Thoinot and Masselin. The bacillus was then cultivated from serum to serum, and from bouillon to bouillon, pure cultures being always obtained. Dr. Carrasquilla further states that

he observed the bacillus in motion in two stages of its development—as long, slender bacilli, which move in an undulatory manner; and as short, coarse, almost elliptic bodies, moving rapidly in a straight line. In the latter he fancied he observed flagella, but he is not positive as to this. His results do not entirely accord with those obtained by Professor Spronck, of Utrecht, who has also claimed to have cultivated Hansen's bacillus. Professor Campana, of Rome, has also convinced himself that he has successfully cultivated the bacillus lepræ. These experiments require confirmation and extended observation before they can be accepted as absolute.

THERAPEUTICS.

Bathing in Arteriosclerosis.

Formerly it was with great hesitancy that any therapeutic baths were used in arteriosclerosis, because of a fear that the already high blood-pressure would be increased and very unfortunate results follow. Loebel (*Münch. Med. Wochenschrift*, July 8, 1899) is of the opinion that the small increase of blood-pressure occurring in baths need not be considered in comparison with the relief they afford from many of the unpleasant symptoms attending the condition, such as vertigo, insomnia, the epileptic and apoplectic attacks. Notably are the complications pertaining to the heart improved—the asthma and angina pectoris. Moreover, mud or peat baths instead of increasing very often decrease the blood-pressure as much as fifty per cent, and prove valuable as a sort of peripheral massage. The author also uses mud baths with good results in uterine hemorrhage and in the rheumatoid pains due to sclerosis of the arterial coats.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

The Treatment of Furunculosis.

In the *Deutsche Medicinische Wochenschrift* of May 4, 1899, A. Philippson advises the use of the application of salicylic acid, the pure acid in limited areas, and in extensive areas a two-per-cent alcoholic solution or a 2½-per-cent vaselin ointment. He claims thereby a more hasty necrosis with expulsion of core, and a more speedy subsidence of the immature boils.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Enophthalmin Without a Rival as an Aid in Ophthalmic Examinations.

After a nine months' trial of enophthalmin, Dr. Herman Knapp (*Archives of Ophthalmology*, No. 3, 1899) highly recommends its routine use in ten-per-cent solution to dilate the pupil in ophthalmoscopy, and as a substitute for atropine in cases of intolerance to that drug. It dilates the pupil in from fifteen to twenty minutes sufficiently for ophthalmoscopic purposes. In thirty or forty minutes a maximum dilatation is reached. In from five to ten hours the pupil returns to its normal state.

Enophthalmin does not irritate the conjunctiva or the skin. In a cataract patient who on several occasions had marked atropine eczema by two or three drops of sulphate of atropine, so that the instillations had to be omitted, enophthalmin instilled several times daily had no irritating effect whatever. This drug dilates the pupil less powerfully than atropine. A five-per-cent solution has too little effect on the pupil to be of much use.

PEDIATRICS.

UNDER THE DIRECTION OF CHARLES G. JENNINGS, M.D.,

Professor of Practice of Medicine and Clinical Diseases of Children, Detroit College of Medicine.

Constipation in Children.

Constipation in infants (*Medical Press*, July 5, 1899) is the practitioner's bugbear. He recognizes the unadvisability of the habitual administration of laxative drugs to the young, but is often driven to countenance their use by the paucity of the resources of which he disposes. It is important to bear in mind that constipation in infants is due in large measure to the element casein, which, if it be present in milk in larger proportion than normal, as compared with the fatty elements, tends to interfere with the due performance of the digestive functions. A child fed on normal casein, but with a low proportion of fat, will probably be constipated. In breast-fed children it does not follow that the proportions of casein and fat are normal, for the maternal supply may be faulty in this respect. Disturbances of health, especially in the direction of indigestion, on the part of the mother, will necessarily be reflected in the composition of the lacteal secretion,

as can be demonstrated by analysis. The first step, therefore, must evidently be to regulate the habits and life of the mother. She must be placed on a fresh meat, fresh vegetable, and fresh cooked fruit diet, with due provision for regular exercise, and restriction in the matter of tea-drinking and other dietetic irregularities. This régime will diminish the proteid and increase the fatty constituents of the milk, and will go far to rid the infant of the tendency to constipation. Should it fail, the best treatment for the child is the administration of cream in doses of from one to two teaspoonfuls in warm water from time to time just before the periodical meal. Failing trustworthy cream, half a teaspoonful of cod-liver oil is a good substitute. In bottle-fed children the treatment of constipation is much simpler, for we have only to secure a due proportion of fat and proteid. It may be necessary in some cases to reduce the ingestion of proteid by giving cream, water, and sugar mixture *vice* one or more of the ordinary meals of prepared milk. Dr. Kerley suggests a mixture of four ounces of cream with twelve ounces of milk, which will give four per cent of fat with a minimum of proteid. In older children the same care to secure a due proportion of fat in their dietary is equally imperative, for much of the constipation from which such children suffer is primarily due to a deficiency of fat. This is a point which ought to be attended to from the earliest period, because, if allowed to continue, we get what may be called "fat dyspepsia." The administration of fat then becomes difficult, but the obstacle can usually be got over by a little perseverance. It is surprising how many persons at all ages declare themselves unable to digest fat. This is in many instances due merely to the formation of a habit; the stomach has been allowed to become unaccustomed to the digestion of fats, and until the tendency has been overcome the mere sight of fats excites repulsion.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Influence of Nasal Obstruction in the Development of Laryngeal Papillomata.

Before the British Laryngological, Rhinological, and Otological Association at its April meeting (*Journal of Laryngology*, etc.), Dr. Abercrombie showed a case of laryngeal papilloma in a boy aged nine years, the subject of nasal obstruction from enlarged tonsils and adenoids. The growth, which had been removed at the first sitting by the laryngeal snare, proved to be a pediculated papilloma about the size of a large bean situated at the junction of the anterior and middle

third on the edge and upper surface of the left cord. A discussion arose as to the influence the decided nasal obstruction might have upon the etiology of papillomata of the larynx. Mr. Lennox Browne contended that nasal obstruction was an admitted cause of laryngeal hyperemia—that some years ago he brought forward a case of arrested growth. Removal of the adenoids cured the papillomata. He saw the child ten years later; a small piece of the growth remained, but the voice was clear. He asked that when children with papillomata were presented a search should always be made for adenoids. The President, Dr. Middlemass Hunt, had never had any illustration of clearing of the nose causing disappearance of laryngeal papillomata. He should be glad to know what proportion of children with papillomata were mouth-breathers. Mr. Bark said that in one case of laryngeal papillomata he had followed Mr. Browne's advice, thoroughly clearing away the adenoids and removing the tonsils, but that he had subsequently to remove the papillomata in the ordinary way.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Brain Injuries: Their Diagnosis and Treatment.

In the *Medical News* of June 3, 1899, is to be found an article of great interest by Chas. Phelps, of New York, reporting two cases of brain injury. The first, a boy of ten, was found, after a fall downstairs, with widely dilated pupils, a cold, pale, but not moist skin, frequent and stertorous respiration, feeble and irregular pulse of 140, temperature of 97° F., and a hematoma over right frontal region. Later reaction was established, and he seemed brighter after each of several attacks of vomiting. He slept a good deal, but became less and less stupid; and two days after injury pulse, temperature, and respiration were normal. Early prognosis was here uncertain, but later developments justify the diagnosis of general cerebral contusion and severe shock. Some instability of the cerebral circulation may persist for some time.

The second case was one of those quite clear cases of fracture of the base; the patient, a man of fifty, being found unconscious in the street, with rather profuse hemorrhage from the right ear. Consciousness was later restored, hemorrhage ceased after four hours, and a paralysis of the right side of the face developed the next day—undoubtedly a paralysis from compression of the seventh nerve by the slowly accumulating clots.

Treatment in both cases is clear and simple, and operative questions are not raised. Though the paralysis will linger, prognosis in both cases is good. Intelligent and accurate observation are of value as to the diagnosis and prognosis to be made.

A Case of Alcoholic Multiple Neuritis.

From the careful study of a case of alcoholic multiple neuritis, J. H. Larkin and S. E. Jelliffe (*Medical Record*, July 8, 1899) find that in fatal multiple neuritis grave variations from the normal structure of the ganglion cells of the anterior and posterior horns, the columns of Clark, the nucleus of Stilling, and the nuclei of the medulla are always to be found when studied by appropriate methods.

These cytological variations are characterized by their extreme polymorphism. They may consist of simple swelling of the ganglion cell or of its chromatin particles; fine granular disintegration of the chromatin; destruction of the chromatin; central, peripheral, perinuclear, and general chromatolysis; wandering of the nucleus to an eccentric position; and destruction of the achromatic structures to complete disintegration of the cell.

To what extent these lesions are due to the direct action of the alcoholic poison on the molecular structure of the ganglion cell (primary), or the degeneration of the peripheral extensions of both sensory and motor neurons (secondary), cannot, we believe, be accurately determined. The conclusion drawn is that the peripheral degeneration is much the more important one of the two.

The best hypothesis yet offered to account for the degeneration of the cells of the column of Clark is that of Van Gehuchten, by the assumption that the ganglion cells of a nervous chain exercise a trophic action one upon the other, the suspension of which produces a chromatolysis and disappearance of the corresponding cells.

Crossed Aphasia.

From the *Medical News'* (issue of July 1) London Letter we learn that Dr. Byrom Bramwell has recently reported a unique case of "crossed aphasia," or loss of speech, following a lesion of the left cortex in a left-handed person, showing that the speech center is not always situated on the right side of the brain in such individuals, although such is the general rule. He also confirms Collins' interesting observation, that if the destruction of Broca's convolution be sufficiently gradual, aphasia does not follow, which he regards as due to the gradual "education" of the corresponding center on the other side of the brain.

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ORIGINAL CONTRIBUTIONS.

IS LEPROSY CURABLE?

BY ROGER S. CHEW, M.D., M.S.C.,

Late Sanitary and Chemical Analyst, Calcutta Municipal Corporation, and Assistant to the Health Officer of Calcutta; Recently Professor of Chemistry and Physiology of the Calcutta-Denver College of Medicine and Surgery; Now Consulting Chemist and Sanitary Expert, Calcutta.

On this point there is a great diversity of opinion, and the majority of the profession inclines to the negative—which I also held some twenty-one years ago—because leprosy runs such an erratic course and so closely simulates some forms of syphilis that a busy general practitioner is very often led to diagnose one for the other, or cannot find or make the time necessary to arrive at a clear diagnosis, without which it would be impossible to lay down a correct course of treatment.

Though the etiology of lepra, whether anesthetic or tuberculous, is extremely obscure, and text-books have very little to say about it, there is more than ample proof forthcoming that it has no association whatever with syphilis, and I have every reason to firmly believe that it *is* a peculiar blending of tuberculosis with peripheral neuroses, both of endemic origin and transferability by accidental non-contiguity of cuticle—just as certain forms of malaria are followed by malignant ulcers, which may be utterly painless and non-contagious yet are freely inoculable.

I know and feel that hundreds of my *confrères* will unhesitatingly declare this theory untenable, and may laugh me to scorn when I confess my belief that for every ill she inflicts provident nature bestows an antidote or cure if we will only look for it. But *sine labore nil* was the curse of Eden when our first parents brought death into this smiling world and angry Jove declared that life should be conceived and born in pain. Yet nature, pleading mitigation of the just though terrible sentence, close by the spiteful nettle placed its antidote the

broad-leafed dock, and in the body of the poisonous scorpion and dread tarantula instilled the means to cure the agony of their sting or bite.

Does the red Indian fear the deadly rattlesnake and moccasin? Does the Maori fly from the tiger-snake, or the Bhil and timid Southal from the savage *Ophiphagus* or treacherous *Krait* or horrid cobra-di-capello? No! they possess the antidote, which the white man has not yet discovered. The redskin and the black man preserve their secret inviolate, and have succeeded where the white man has failed, because the white man is too scientific or in too great a hurry to seek to discover by intricate processes what nature declines to disclose unless we bide *her* time and coax her.

I trust I may not be misconstrued as thinking myself smarter than my *confrères*, many of whom I admit myself far too stupid alongside of; but to better illustrate my meaning: Medical literature teems with modes and results of the surgical eradication of piles. I have done my full share of operations, but never perform one now and never need to, as there is a very simple remedy—so simple, indeed, that the profession refused to accept it because it was unscientific. I also laughed at it one time, but results brought the laugh against me. My tutor was an unlettered, untitled fakir, who dropped into my surgery one morning as I was asking a man with a huge bunch of extremely painful and bleeding hemorrhoids whether he would submit to operation. "Sir," said the fakir, "pardon my interference. Will cutting away swelled veins alter the current of the blood permanently? *That* man is afraid of the knife. Let me whisper in your ear. Take a *chota harra* (the lesser gallnut); broil it as you would a coffee berry; then powder it, and mixing the powder with a little fresh butter, let the man apply it to the piles after each stool. If it fails to cure him may Allah send me to perdition." Don't muddle this with the "unguentum gallæ" of the Pharmacopœia. Reader, skeptic of results I tried it. Eight applications cured the man, and to my surprise the first application stopped the bleeding entirely. Since then I have cured some hundreds of cases with the same thing.

This is a digression, but the force of it will appear by and by. To hark back to my subject.

Mr. F. W. Hutchinson, in answer to the question, "Is leprosy curable?" put him by the Legislative Assembly, Honolulu, replied, "No; at least not under any known treatment." Dr. Arthur Mouritz said leprosy was a "disease *sui generis* and incurable," while Dr. G. Trosseau chimed in with: "Any medical man who respects himself will never say 'I will cure leprosy' under the tropics." Yet in spite of this denunciation Sir Jonathan Hutchinson, the great syphilographer and dermatologist, placed before his postgraduate class several lepers

whom he declared were *cured*, though "the anesthesia persisted and the sores occasionally reappeared. But this recurrence of the ulceration," says Sir Jonathan, "is due not to any leprotic activity but to some other cause." Here I totally disagree, as the anesthesia is one of the chief distinctive features of lepra, and so long as that remains the *vis* or virus lepræ persists, though it becomes sluggish enough to permit of closure of the ulcers and sinuses, which may reappear at any time and most always in the same site.

Then while Dr. W. R. Kynsey deplores that "no treatment has as yet been found of any permanent benefit," Dr. Sidney B. Swift, late resident physician of the Molokai Leper Settlements, sarcastically says: "What has become of the cases cured by Fitch, by Arning, and by Goto or by Lutz? Come to the Settlement and you will see them in their graves." And the Hawaiian official responds: "The alleged cures of leprosy are mythical." But a recent bishop of Honolulu candidly admits "official obstruction stands in the way of any curative treatment having a fair trial;" and Dr. N. B. Emerson, of Hawaii, declares: "In spite of a number of claims to the contrary we believe it safe to say that no one has been able to prove to the satisfaction of the medical profession that a single case of this disease has been definitely cured;" while Dr. Arthur Mouritz swells the sad refrain with: "This is the briefest question of any to deal with, but the most disheartening to a physician, for so far no remedy has been found beneficial."

But apart from the cases of Naaman, the Syrian leper, and those from whom the leprosy vanished at the Divine Master's command, the Holy Scriptures speak of cures. The British medical papers were full of the cures effected by Unna's system. Koch's tuberculin claims some rescues, and Goto did cure several cases in Japan, though he was not so successful in Hawaii. It is a well known fact that the late Dr. Bhaudajee, of Bombay, obtained some wonderful results in leprosy with the oil of *Hydnocarpus Inebrians*, and while the Mattei system claims to have cured some cases, there are in Calcutta alone some 200 healthy persons who a little over nine years ago were pronounced "incurable lepers;" but strange to say, they have never complained of anesthesia nor have had a recurrence of their former ulcers, sinuses, etc, since June, 1891, when the Medical Committee of Inquiry (appointed by Mr. James Wilson to investigate the cure of leprosy) pronounced them "*clean* from all traces of their late disease." Is nine years' immunity from the recurrence of a disease insufficient testimony of its cure? Are these cases, which are very much alive and some of whom were inmates of the State lazarettos, mythical; simply because it is not to official interest to credit to non-official *Κυδωσ* (*Kudos*) successes which the many calls on their time and patience will not let them-

selves achieve? Is it wisdom to cry over miseries of our own creation, or after wilfully walking into danger to blame the danger for overtaking us? Is it kind to decry the successes of others simply because we have not been given the opportunity to succeed likewise? Yet in *official* India such seems to be the case when physicians holding eminent positions admit being "disheartened," and stigmatize non-official medication as quackery; merely because they do not care to remove the cause of their discomfiture and seemingly steadfastly set their eyes and ears against the truth.

My remarks may appear caustic, but they are nevertheless true, and under existing circumstances extremely temperate, as the reader will be able to see.

When twenty-three years ago I first turned my attention to lepra I was (as Surgeon-Major Wilson, A.M.D., termed me) "a very hard-working but insubordinate subordinate of the Bengal Medical Service, with an inquisitive bent of mind and a trifle too much of the confounded Yank" about me. As the various text-books could tell me nothing definite regarding leprosy, and as I had a very great deal of knocking about on detachment marching duty, I had to collect information as best I could from their friends and relatives as well as from the lepers I ran across in my official journeys, and whenever I heard of a drug having proved efficacious in some one else's hands I resolved to give it a *fair* and honest trial; but the disheartening part of it was that that drug that gave good results in one district either proved utterly abortive when tried in some other place or gave very unsatisfactory results.

The following table shows that while anacardium cured fifteen out of sixteen cases of leprosy treated by it in the United States of America, it failed in fifteen out of twenty-three cases in Calcutta, and in four out of six cases in Mandalay; but out of four and five patients, respectively, in Madras and Rangoon it cured three in each town, whereas it proved an utter failure at Bordeaux, Cairo, London, and Liverpool; and of the six cases treated with it in Alexandria, Australia, and Mexico, only three were cured. Or, in other words, the cures amounted to barely twenty-one per cent of the cases treated with these eighteen classes of drugs, while of the 778 cases so treated, 612 proved disheartening failures, which might have conduced to the unfortunately popular theory of incurability if I allowed them to act as a perpetual damper to my inquiry. But far from being ashamed of my failures or disappointments, I am rather *proud* of them, for to them was really due the determination (or, as some did call it, "cussedness") to keep on trying till I did find a remedy that would suit every clime and constitution, since I had had more than ample evidence before me from

time to time that Sir George Birdword's suspicion of the influence exerted by "telluric, atmospheric, and other external conditions" on leprosy had a good deal of truth in it, and the task lay in finding some drug that despite personal idiosyncrasies and differences of climate would affect alike all persons suffering from the same manifestations of the same disease, no matter what the initial exciting cause may be.

Names of the various drugs employed by Dr. Roger S. Chew between 1877 and 1891.	America.		Australia.		Bengal and Calcutta.		Burmah.		Egypt.		England.		France.		Madras.		Mandalay.		Total cures.	Total cases.
	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.		
Asclepias gigantea (Indian Mador)	1	7	0	1	0	5	0	2	3	6	0	2	0	2	2	9	0	2	6	36
Anacardium occidentale (lesser Cashew nut, the *Bhilawa* of Bengal, or the Ordeal nut of the Arabs	15	16	1	2	8	23	3	5	1	4	0	3	0	2	3	4	2	6	33	65
Arsenic acid and arsenic compounds with iron, sodium, potash, and quinine	0	3	0	3	9	21	1	2	0	4	0	2	1	3	1	2	1	3	13	43
Burdock (*Arctium Lappa*)	1	4	0	2	0	5	0	1	0	3	1	4	0	2	1	2	0	2	3	25
Banchee (*Psoralea coryli-folia*)	0	3	0	2	3	8	....		1	3	2	4	0	2	0	2	0	2	6	28
Caroba, of Brazil, or *Cybiatax Antisyphilitica*, the *Jacaranda procera* and *tomentosa* of Colombia	0	3	1	2	0	15	0	1	1	3	0	2	0	1	1	1	0	1	3	30
Chaulmoogra (*Ol. Gynocardiae*)	0	11	0	4	19	33	0	7	0	5	0	5	9	9	8	12	0	12	36	88
Chrysarobin (powdered *Bahia*, Araroba powder, Goa powder, or Rhein)	3	12	0	5	12	83	0	12	1	8	2	8	0	3	2	15	0	10	20	156
Gurjun Balsam (wood oil)	0	6	0	2	4	42	1	5	0	6	0	2	1	7	8	10	2	7	16	87
Hydrocotyle Asiatica	1	4	3	5	0	3	0	2	0	6	1	3	0	1	1	2	1	3	7	27
Ichthyol (fish-oil paste or sodium sulpho-ichthylate	0	3	0	1	1	3	1	1	0	6	0	2	0	1	0	1	1	2	3	20
Iodoform (internal and external)	2	4	0	2	0	2	0	1	0	3	0	2	0	1	1	1	0	1	3	17
Lawsonia alba (Henna, Mehndhi, Indian Myrtle)	0	3	0	1	1	2	0	1	0	2	1	2	0	2	1	3	0	1	3	19
Naphthol (naphthyl alcohol)	2	3	0	1	0	2	0	1	0	3	0	2	0	1	0	1	0	1	2	15
Neem oil and Neem extracts	1	4	0	1	2	6	0	5	0	5	1	2	0	1	4	7	3	5	11	34
Pyrogallic acid (pyrogallol)	1	4	0	1	0	2	0	1	0	4	0	2	0	1	0	1	1	3	2	19
Resorcin	0	2	0	2	0	2	0	1	1	4	1	2	0	1	1	2	0	1	2	17
Sandal oil, and powder	1	3	0	1	1	2	0	1	0	3	0	2	0	1	0	1	1	2	3	16
Total .. Cures	28		5		60		6		8		5		11		30		12		166	778
Total .. Failures	67		33		226		43		68		46		31		46		53		...	...
Gynocyanauridzarin— Cures	12		5		183		12		8		8		3		15		10		256	256
Gynocyanauridzarin— Failures	*nil.*		0		*nil.*		0		0		0		0		0		0		0	...
Grand total of cases...	107		43		469		61		84		59		45		91		75		422	1034

But *how* to find such a drug, and when found how to prove its value outside of brute creation or get human beings to trust themselves to it? Koch and Pasteur did not always get the same results outside their laboratories as they obtained within their doors, and it frequently happened that the results obtained by other scientists differed materially when transferred from lower animals to the human subject, and *vice versa*.

Day after day I struggled on; numberless were the experiments made on brute and reptile creation; but to no effect were the pharmacopœial preparations exhausted. I ran through the mineral world, such as arsenic, silver, mercury, tellurium, vanadium, gold, iron, uranium, antimony, lead, tin, and their manifold official and non-official compounds, but to no avail. So also with crude attenuated viruses and serums of syphilis, erysipelas, lupus, septicemia, hospital gangrene, malignant ulcers and sloughs, whether *per orem*, inoculation, invagination, or *a recto*. Similarly the whole gamut of recognized alkaloids and their combinations and salts, and an imposing list of vegetable extracts and tinctures. These repeated disappointments and failures explained to me the majority plea of incurability, and, sorely disheartened, I was well-nigh giving up the search in weariness and sheer disgust when I was severly bitten by the then prevalent mania for *new* alkaloids and derivatives from Indian flora, and struck out of the beaten track on to an entirely new line in the oil-yielding plants particularly, and proved the physio-pharmaco-pathological value of each crystalline property I extracted as I got along on dogs, cats, rats, and frogs.

Some of the plants did not yield alkaloids, others did, while the extracts of some, when successively treated with iodine, ammonia, madder, sulphur, or gold, deposited curious-looking crystals which gave still more curious chemical and physiological reactions, some of which were startling indeed. Notably among these was a crystalline compound isolated from a maceration of the roots, leaves, and seeds of a three-year growth *Gynocardia lancifoliata*. It had the chemical composition:

$$CH_4O_2 \left\{ \begin{array}{l} C_3H_8O_2 \left\{ \begin{array}{l} CHO \\ CH \end{array} \right\} Au \left\{ \begin{array}{l} K \\ O \end{array} \right\} \\ C_2H_7O_4 \\ C_3H_8O_2 \end{array} \right\} Au \left\{ \begin{array}{l} C_2H_3O \\ C_1H_6 \end{array} \right\} CH_4O_2$$

which might be briefly written $[(C_9H_{21}O_7)_2+KCNO]+Au_3$, but these crystals were very unstable, as when exposed to air they absorbed nitrogen and moisture, and becoming leathery in consistence, deposited the gold in a state of fine division. Further exposure gives off prussic acid, carbon dioxide, ammonia, and free hydrogen, and leaves behind a pasty mass which is a mechanical mix-

ture (*not* chemical compound) of cinnamate, cumylate, and hydroxide of potassium, with methyl, finely divided gold, and water. Strange to say, these crystals will not redissolve in their mother liquor and are insoluble in any known solvent, except cinnamic alcohol (under extremely heavy pressure), and if immediately passed, in such solution, into olive oil (which I employ largely in my practice for internal exhibition in malarial and paludal affections), they not only preserve their medicinal virtues for a long period—I have some now that I made up in 1888 and it is still *active*—but also combine so perfectly with oil as to alter its constitution and lead to considerable complexity in confirmative chemical analysis of the olive oil used for further solution. Another reason for my using the olive oil is that I can better regulate the posology of these crystals, to which I have given the name of "Gynocyanuridzarin," and which I call C. O. N. when diluted with olive oil in such proportion that one minim of the oil solution contains 0 00001 grain of the crystals.

Given internally to dogs and cats in doses of 0.01, 0.005, 0.002, and 0.0025 grain, these crystals produced cramps, diarrhea, and vomiting, with paralysis of the musculo-cutaneous nerves and great physical prostration; while doses of 0.1 to 0 5 grain caused violent convulsions, resulting in death in less than twenty-four hours, and autopsy revealed some of the post-mortem appearances of potassic-cyanide poisoning.

Doses from 0.00001 to 0.0001 grain, on the other hand, appeared to act as a powerful musculo cutaneous neural stimulant, causing in the healthy subject anesthetic areas, ulcers, and crops of papillæ, but in the ailing subject inducing rapid granulations of indolent ulcers, converting pus and sanious exudations into serous discharges which rapidly lessened and disappeared, retarding the development and movements of tubercle bacilli, increasing the number of red blood-corpuscles, and apparently stimulating the leucocytes to increased energy.

Proud of my discovery, though not oversanguine about ultimate results, I sent full details concerning these crystals to several of the home, Indian, and British medical and chemical journals. The British papers ignored my communications, probably because a descendant of Brother Jonathan or Uncle Sam had no right to discover anything in British territory. With the exception of the *Indian Medico-Chirurgical Review* and the *Bengal Times* the Indian journals declined to accept anything from a non-official, and a "Yank" to boot, and of the home papers the *Louisville Medical Monthly* was the only journal that my friend Dr. A. Hitt could persuade into accepting my article, as I was only a young writer at that time, when the majority of the profession, Sir Jonathan Hutchinson included, had set their faces against the possibility of "cure."

So far I had succeeded far beyond my greatest expectations with the brute creation, but how would the drug work on man? My first human case was that of an East Indian clerk, who told a most harrowing tale of how after eighteen years of hard and honest service he was suddenly dismissed from employ to maintain his wife and eleven children as best he may, because fifteen years previously he had showed slight symptoms of leprosy that remained stationary till very recently, when the disease, taking a forward bound, grew worse and worse, and some medical men had told his chief that he was incurable and that it was dangerous to his office mates for him to remain in office. He said he had heard that I was experimenting on dogs, etc., and as he cared precious little as to how soon death finished his sufferings he begged me to try what I could do with or for him. The temptation to prove a pet theory was great indeed, but the danger to me was greater, for should the man die under the experiment I was in a country where I might be indicted for poisoning him. Anyhow I risked the chances, and putting him on C. O. N. watched him anxiously. A week later his eyes seemed brighter and he did not crave for death, while there was a distinct change for the better in his ulcers. The progress of his cure seemed slow at first, but at the end of the fourth month there was neither sign nor symptom of anything that could diagnose him as a leper. This was nearly twelve years ago. I see the man frequently, and he has not had a single day's illness since he was discharged from the C. O. N. system of treatment. After his cure he brought me three cases, whom I treated similarly with like results; and these cases brought others. Believing that I had at last solved the problem of lepra, I sent small packets of C. O. N. to my relatives and medical friends in various parts of the world, asking them to test the virtues of the drug and take careful notes of the results obtained. They did so, and I am happy indeed to be able to report that every one of the 256 cases treated with C. O. N. recovered from lepra.

Later on Mr. James Wilson, editor of the *Indian Daily News*, a straight man with broad views, but a perfect stickler for proofs, like Thomas Didymus, appointed a test committee of twenty-nine members (viz., eight army surgeons, six European and Eurasian non-official doctors, five editors of the leading papers, and five respectable gentlemen of tried probity) to inquire into cure of leprosy, and asked me whether I would undertake to treat twelve lepers under the eyes of this committee. I consented, and the final findings of this committee are published in the *Indian Daily News* of June 11, 1891. I am proud to be able to say that there were no failures among these twelve lepers, the last of whom, a leper of ten years' duration and a rather bad case, was discharged on March 15, 1891, as cured, and promised

to report himself for inspection every two months for a year and a half. He kept his word, and is now vigorously plying his trade of tobacconist without the slightest tendency to recurrence of his lepra or anesthesia.

At the same time as the *Indian Daily News* committee were sitting at Calcutta the Prince of Wales' Leprosy Commission was holding a session here. Mr. Wilson thrice wrote to Dr. Beaven Rake, one of the leprosy commissioners, inviting his presence at the committee meeting on my cases of leprosy, but though he emphatically refused to attend he (Dr. B. Rake) actually told the *British Medical Journal* (April, 1892) that he "*never* heard of Dr. Chew's cases, or he would have impartially considered them;" and in the columns of the *New York Medical Record* (Dec. 2, 1893) he preserves a similarly hostile attitude and more erratic conclusions.

The Jesuit fathers in charge of the Mattei Hospital and Asylum at Managalore, in South Canara, heard of my cases, and sent to me for C. O. N. In their letters to me and in the body of their "Annual Report" they reported favorably on it, but by some peculiar oversight (see letter) Dr. Samuel Kennedy, the Mattei exponent and traveler, gave the *Kudos* (Κυδωσ) of the C. O. N. also to Count Mattei.

On May 31, 1890, the authorities in charge of the Government Leper Asylum in Calcutta wrote to me:

> SIR—With reference to previous correspondence I am directed to inform you that the Executive Committee have no objection to your treating by your system the six lepers in the asylum who are willing to place themselves under your care, provided that you will satisfy a medical officer that the remedies you propose using are not harmful.
>
> Yours faithfully,
>
> (Signed) P. McGUIRE, Secretary.

I waived *amour propre* and gave the proofs and assurance required, but for reasons best known to themselves the asylum authorities seemingly troubled themselves no more about me, though they did place several of the lepers on Dr. Unna's goa powder, resorcin, and ichthyol course, of which if I remember aright Dr. Unna declared that he never said it would cure leprosy, and as a matter of fact it did not do so in the Calcutta Leper Asylum, where the majority of the patients had to give it up, as it was playing havoc with them.

Having made no secret of the C. O. N. system I naturally fail to see why the official members of the medical profession assiduously refuse to consider its merits and persistently stigmatize it as a patent medicine or secret nostrum, especially when I have offered to take fifty or sixty of their medical subordinates in hand and teach them the manipulation required in the preparation of C. O. N., and to fully instruct them in the methods of applying and using the drug to a successful issue, provided that I am given fair play and am not hampered by red tape.

SIMULATED DISEASE OF THE MIND AND NERVOUS SYSTEM.*

BY SAMUEL BELL, M.D., DETROIT, MICH.,

Formerly Medical Superintendent of the Upper Peninsular Hospital for the Insane.

There may be and are different motives which incite man- and womankind to feign disease, but there are two principal objects in view generally: first, a desire to escape some form of punishment; secondly, a desire for gain.

The first motive is most frequently found among criminals and soldiers. The responsibility for crime or for criminal acts may be diminished if there be sufficient proof of the diseased mind, and sickness may reduce the discomforts of prison life, and be sufficient cause for obtaining a pardon. The hardened criminal and loafer in our public institutions may simulate in order to escape manual labor which is demanded of him, and where sickness is supposed to exist a more acceptable diet will be forthcoming. In military life just before a battle many cases of illness develop. When it is not real the condition is called "sogering," and in countries where compulsory military service exists many devices are reported as practiced by those who desire to escape the danger and exposure of battle.

The second motive for feigning disease — namely, the gain of wealth — is most likely to be met with by the physician in general practice. I refer to physical injuries resulting from accident. Human beings are hourly exposed to exigencies in modern life, and although ordinary care is exercised, may suffer personal injury by negligence on the part of another, either contributory or otherwise. As a result of conditions which actually exist, our courts are filled with suits for damages. Railway corporations are compelled to pay large sums for damage suits annually. A single corporation in one of our large cities pays annually on an average over $150,000.

Simulation of insanity is not a modern innovation. In the sacred writings it is recorded that the shepherd king of Israel changed behavior and feigned madness by scrabbling on the doors of the gate and allowing his spittle to flow upon his beard because afraid of the king of Gath. In order to escape the Trojan war, Ulysses feigned insanity by plowing the seashore and sowing salt instead of corn.

Frequency of Simulation.—The question as to the frequency of simulation has been discussed with reference to claims for damages for personal injuries. Statistics as to the frequency of feigning are somewhat uncertain and show great variations. The most reliable statistics at hand are those from the Boston Hospital for ten years.

* A lecture delivered before the Medical Department, University of Michigan.

Very few cases were found in the wards, but as more natural to be expected malingering was more frequently found in the office of the admitting physician to the hospital. During this period 511 cases were refused admission on account of no disease being present or the applicants practicing malingering. The object the malingerers had in view was food and shelter in the hospital. In penal institutions malingering seems to be more common. Its frequency seems to depend more upon the strictness of the prison discipline. The prison physician is constantly on the lookout for prisoners who report at sick call in the morning for the sake of escaping work for a time, or in the hope of being admitted to the prison hospital, where they are supposed to receive more liberties and better food.

Feigning injury is more common and of great importance to the physician as well as those liable for the same. The surgeon is frequently called upon in court to determine whether the patient's condition is the result of an injury or due to other pathological conditions which may have existed. Dr. Hodges, of Boston, believes that out of twenty-one cases he has seen, ten were fraudulent and six were doubtful. Dr. Rigler out of twenty-eight cases thought seven were fraudulent and thirteen doubtful. Dr. Page, in his work on injuries of the spine and spinal cord, in 234 cases, considered simulation of the grossest exaggeration to be very common. It is only during the last few years that neurologists have brought forward statistics showing the frequency of simulation. The results of their investigations do not show that simulation occurs as frequently in the office of the neurologist as in that of the surgeon. It is not uncommon to hear claim agents, corporation lawyers, or the railway surgeon say that a vast majority of the applicants are frauds. The examining surgeon of the Manhattan Elevated Railway, who has had extensive experience, gives as his opinion that simulation is only seen in a small percentage of cases, and in such cases it is so plain and the symptoms are so grossly exaggerated as to be easily recognized by the trained observer. Dr. P. C. Napp's personal experience coincides with that of the latter's views, stating that in all probability less than four per cent of the cases that have come under his observation were simulated.

Whether individuals feign insanity or injuries to the nervous system very frequently or not, we are unable to give a decided opinion, but we do know that every once in a while cases occur of feigned insanity, and probably feigned or exaggerated injury, for which the combined skill of the surgeon, alienist, and neurologist is necessary to determine whether or not abnormal conditions exist. That the simulator can successfully sham insanity is beyond a

doubt. A few years ago a young woman presented herself at the Insane Pavilion at Bellevue for admission to Blackwells Island Insane Asylum. She pretended an apathetic condition, loss of memory, and delusions of persecution. As the time at the Pavilion for examination is not very long, and the physicians in charge are not supposed to be medical experts, or that the people brought there are shamming craziness, the mistake, if it was one, was quite natural. At all events, she was admitted as insane to the asylum, and her experience while a patient therein was given out to the press in a highly sensational and grossly exaggerated manner, if not in some instances actually untruthful. With our advancement in the knowledge of diseases and our improved methods of clinical researches the difficulty of simulation becomes enormously increased. In fact, symptoms which are objective can in reality only be successfully defined by the stethoscope, ophthalmoscope, or microscope, and other modern instruments which assist us in physical examinations all give testimony when properly used which the malingerer cannot counterfeit, especially in the hands of a trained physician.

The Difficulties of the Simulator.—A person who attempts to feign insanity has a very difficult problem to solve. A simulator in some respects must be like an actor, but the latter need not be an author; neither is it necessary for an actor to be incessant. The simulator must improvise, and his simulation must be incessant. Frequently you will read a portrayal of cases of insanity in novels. They usually give a false idea in regard to mental disease, and are made to represent either a raving maniac or a person so demented and stuporous that they are unable to do any sensible act, or speak a sensible word. There is practically only one form of feigned insanity which is difficult, even for the experienced alienist, to detect, viz., the speechless form. The most common form is that of absolute dumbness; aphasic disturbance, such as word blindness, word deafness, motor aphasia, or paraphasia, demands extra skill on the part of the simulator. In the majority of cases this aphasic condition is associated with hemiplegia. Feigned muteness is occasionally seen as one of the symptoms of feigned insanity, but persistent and protracted observation will usually find the simulator unguarded, and the ingenious investigator will lead him into making an unguarded remark. If a person can remain absolutely mute it becomes exceedingly difficult to unmask his true condition. Field reports a case where a man for weeks would not utter a word, and careful observation failed to show that he moved during the night; in passing through a doorway he would strike his head, unless the attendants took pains to push it down low enough for him to go under, and thus he received several severe blows. He

would not take food even if it were left beside him, although he would swallow it if it were put in his mouth. He did respond, however, to cold water, when it was sprinkled upon him unexpectedly, and he finally escaped from the prison. One of his fellow prisoners afterwards confessed that the man talked with him and occasionally moved about when no one was near him.

The slight excitement of simple mania and the mild depression of simple melancholia are simulated with a certain amount of success, but no patient has the physical endurance to be successful in feigning excitement and the violent actions of the ordinary maniac. Although he may assume the incoherence of speech for a time, he cannot keep up the incessant flow of incoherent phrases which is characteristic of the acute maniac. After a time nature must assert itself, and fatigue will be manifested; insomnia, rapid loss of weight, and loss of appetite, are all present in acute mania, and are beyond his control. In acute melancholia, although the person may for a time assume the deep depression, he cannot keep up the anesthesia and profound depression, the manifestations of grief and self-absorption, nor can he even simulate the cold and clammy extremities, slow and weak pulse, coated tongue, loss of appetite, and various other physical symptoms so often present.

A physician going his daily rounds in the wards of a hospital for the insane will find patients who are sick feigning health, and others feigning physical ailment, both mentally deranged. The different type of patients will have one object in view, that of release from the institution. The class of patients feigning physical illness is generally that of a paranoiac. By the process of reasoning which appears logical to them, they attribute their illness to being confined, and that so long as they are confined in the institution, deprived of their liberty, and away from their families and friends, no treatment which can be given them by the hospital staff will relieve them of their ailment. They are always very solicitous for sympathy, whether it be from the physicians or attendants, or nurses, or from strangers. The other class generally suffer from an entirely different form of mental disease. They are frequently found among those who have suffered from puerperal mania; having passed through the acute period, their convalescence being established and their surroundings appreciated by them, they feel extremely anxious about the condition of the family at home—it may be the husband, and in the majority of cases the infant a few weeks or a few months old. I have observed patients during this period answer in the negative when asked if they were suffering from some physical ailment, when it was quite apparent to the examining physician that such conditions really existed. Their idea of belittling

their physical condition was to give the physician an impression that they were physically and mentally well, and in a condition to be returned to their families.

Some anthors are of the opinion, and give it as their experience, that paranoia is a very common feigned form of insanity, but the number of cases reported are quite few, and we can understand that the successful simulation of logical reasoning of the paranoiac on the subject of his delusions is most difficult. If simulators could feign such a feasible line of reasoning and systematized delusions and plausible excuses for every act, the shrewdness and apparently the ingeniously conceived ideas of persecution which the paranoiac will give is beyond the knowledge of any one unless he has had unusual opportunities for study.

No Inflexible Rule that Can Be Followed. — There is no rule or inflexible test whereby feigned insanity can be detected. Each case must be decided according to the conditions which are present. Every case is to a certain extent a law unto itself. Alienists everywhere recognize the necessity for such conclusions. When a person is charged with a serious crime, and his or her sanity in question, it is well for the court to select a committee of competent alienists to investigate the case in all its bearings. In several foreign countries there is a court physician whose duty it is to decide all doubtful medical cases, and of whose ability to perform such important duties there is no question. It is very difficult even for the experienced alienist to determine the correct mental status, even after several visits, in some cases. It has been the experience in not a few cases tried in our State, as well as others, that lawyers take an entirely different view of mental disease from that of the expert. Medical witnesses with no special knowledge of insanity are often called to give expert testimony, and such testimony is sometimes used by shrewd legal counsel for other purposes than that of the true interpretation of science. A jury composed entirely of laymen is not competent to try a case which involves the question of mental alienation and brain disease. In not a few cases the ends of justice and mercy are sometimes thwarted, and we are wont to believe that our system of medical jurisprudence of insanity is in need of revision. To detect simulation and to produce the evidence beyond a doubt is a subject of the greatest difficulty. Hammond says that no one, no matter how skilful an alienist he may be, is beyond the point of being imposed upon for a short time at least by a person assuming to have a certain form of mental derangement. Snell remarks that if a simulator perseveres and applies passiveness and obstinate silence, it is not impossible that insanity may be so perfectly simulated that detection may not be

accomplished. Connoly Norman regards the question of simulation of insanity as one of the most difficult with which alienists have to deal, one requiring much experience if a satisfactory decision is to be arrived at. The physician who assumes the responsibility of determining the differential diagnosis between the insane person and the simulator must possess more than a book knowledge of the conditions which he is investigating. It may be a fact that a person who attempts to feign mental aberration will imitate some of the symptoms of the more frequent forms of insanity. Even if this were true the various psychological phenomena which are manifested even in the more frequent forms render it absolutely necessary that the physician shall have had a personal experience of the true conduct of the insane in the different stages of the disease, and also experience in the different forms of insanity.

Feigned Symptoms of Motion and Sensation.—Under this head may be included paralysis, convulsions, epilepsy, ataxia, tremor, choreal movements, anesthesia, pain, and hyperesthesia; also of the special senses, chiefly vision and hearing. Epilepsy is a frequent disease and of striking nervous characteristics, the epileptic fit being so well recognized by the laity that it is most frequently feigned by malingerers. It is commonly feigned by criminals with the object of escaping work, or to receive more sympathetic treatment, probably in the hospital. There are those among the criminal class who circulate in public places and feign epileptic attacks. They so arrange the seizures as to have them occur in crowded places, in order to attract the passers-by and to obtain sympathy and alms from those benevolently inclined. There are generally several of these malingerers who club together. One undergoes a violent epileptic seizure and draws the attention of the crowd, while the other members of the gang pick the pockets of the bystanders.

The individual as a rule who attempts to simulate epilepsy or hysteria has the attacks only when he thinks he is observed, and seldom has them in dangerous places. A very interesting case was reported in the *Boston Medical and Surgical Journal* of a man by the name of Clegg. He was able to baffle the skill of the prison officials and physicians and escaped punishment several times on account of his proficiency in feigning epileptic attacks. This man by much study and observation had learned to imitate fits very accurately. Physicians and others during the attacks would thrust pins and needles into him and also under his nails, and he would manifest no indications of sensation, or flinch when the cornea was touched. The frothy saliva would exude from his mouth, his head would turn on its axis, body twist in the attack, and at times he would have clonic spasms of the

muscles of the neck, so that his head would pound against the floor with force enough to abrade the scalp. The facial expression he could assume perfectly, and the various scars on his face, head, and body he was fond of calling attention to. Eventually he was detected, and one reason which aided in leading to his detection was the definite motive he had for feigning. He would have fits on visiting the physician's office for the first time; how rapidly he could change from an epileptic to a natural expression when he thought he was unobserved, also the fact that in the fits the fingers were not closed over the thumbs, nor were the nails livid; and how easily the rigidity could be overcome (the hands would close again after they were once opened) —these were among a number of indications which led to his detection.

Dr. Coombs, of Boston, relates as his experience that out of ninety patients who were epileptics who had visited his office he could not recall over three who had fits during the visit. It is often frequently remarked when the physician is going his rounds in the wards of an insane hospital where there are many epileptics how seldom he will observe a patient in an attack. In almost daily visitation where we have about twenty epileptics, some of them having fits very frequently and in succession, I cannot recall more than three in an attack during my visits in the course of a year.

Symptoms Difficult or Impossible to Feign.—It may be remembered that there are symptoms which it is impossible to feign—for instance, during a genuine attack the patient is unconscious and has entire loss of sense. The pupils are often dilated and nearly always immobile, and the conjunctivæ are anesthetic. The patient is pale at the beginning of the attack, and later becomes cyanotic if the convulsions be severe. After a severe attack there is profound stupor, which lasts for an indefinite period. There is also in a true case of epilepsy paralysis of the sphincters. Paralysis being also of frequent occurrence and readily observed, it is, next to convulsions, most likely to be feigned, although if paralysis be accompanied by atrophy and the softening condition of the muscles, as is frequently the existing condition, feigning is not probable. While there are no hard and fast lines that can be laid down in detecting simulation of diseases of the mind and nervous system, there are a few principles that if observed and followed will render it very difficult, if not impossible, for an impostor to succeed. The simulator is at a disadvantage; he must be as familiar with the disease which he attempts to feign as the examining physician, must stand examination by all tests usually employed in clinical examinations, and must constantly be on his guard lest he betray himself in an unguarded moment. It can be readily observed

that the possession of such knowledge is beyond the ordinary lay mind. It is possible that an intelligent layman could be instructed by a competent physician to become an expert simulator. Even when such is the case, close observation of the differences between the extent of symptoms from which he professes to be suffering and the genuine suffering can almost always be noticed. For instance, one important point to remember is that, as a general rule, the simulator will assume an exaggerated condition, and the insignificant symptoms will be magnified and the clinical picture be much overdrawn. If he attempts to feign paralysis, he will make paralysis the important symptom, when in actual conditions paralysis and weakness exist together. The same will apply to loss of sensation, and the simulator will complain of complete anesthesia, while in all probability there is only diminished sensation. He will give expressions of suffering from violent pain, when it is altogether likely that if any pain is present, it is an average ache or pain. He calls attention to his symptoms. They do not have to be searched for as in the genuine sufferer, and close questioning will detect faults or contradictory statements, although it must be remembered that the statements of patients suffering from the actual disease will conflict, especially those suffering from nervous disease and loss of feeling.

Many instances are related by neurologists where the sensory tests, more or less severe, have been applied to the feigner successfully under the stimulus of being examined under such circumstances; the cornea and conjunctivæ could be pricked without winking. Pins and needles have been thrust into the skin and flesh, and strong electrical currents and hot irons applied, without causing the patient to flinch or give any manifestation of pain; but when the patient was taken unawares, as in the instance of Honig when he caused a needle to pierce his patient without any outward manifestations of pain, the next day the same prick of the needle was made in him unawares, when it immediately caused an outcry. Several cases are related where a bucket of cold water was thrown on a person while standing in front of him without any effect, but when the refrigerating beverage was thrown from behind and unexpectedly the man immediately started from his position. Many tests which may be made without the patient being aware will suggest themselves, and be very effective. The detection of loss of vision is comparatively easy. In order to feign complete blindness requires a great amount of ingenuity, skill, and perseverance. Not many have sufficient control of their eyes to have them remain unmoved when objects are moved in close proximity to them. The general movements and rigid stare and the step are not easily counterfeited. Such changes in a large majority of cases can be detected by the use of the ophthalmoscope.

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EDITORIAL ARTICLES.

PROFESSIONAL COURTESY.

Entering as they do the homes and private lives of men and women, by avenues rigidly closed to all others, physicians may at times profitably consider such subjects as the one here approached. The very fact of the freest possible ingress under unusual circumstances should be—and almost invariably is—the best guaranty that the delicacy of the individual situation is understood and thoroughly abided by. No question of morals, or of ethics, is intended to be touched upon at this time, but only that of personal bearing and manner, in so far as thoughtful refinement therein may add to the social and professional standing of and regard for the practitioner, and contribute to his own reasonable self-confidence in his special station in his community.

It is an established truism that the tendency of authority is often to harshen the manner, and not infrequently to harden also the personality of its possessor. It is almost uniformly so in the lower grades of life and work, but diminishes in evidence and in effect by ascent into the realms of culture and experience. One is almost at times led to believe that there are fashions in taste and manner as well as in etiquette and costuming. It would seem, for instance, that men are not only less chivalrous to women, but less courteous to each other, than formerly. The individual is more and more apt to be all things to himself, asking no favors and granting no privileges. To get out of your way, or say a half-hearted "thank you," is a compromise of self-respect. There must be no sense of obligation, and each must take as much as he can get, and give no more than he must. It might have been this state of things that drew from a distinguished foreigner a remark to the effect that the only liberties he found in America were the liberties which the people took with him.

The fact that civility and courtesy cost nothing is probably the reason why they are so often lacking in those who come into contact with all classes and conditions of people. A thing that any one can have is too often thought not worth having, and it is a common observation that persons who are everything that is genial and courteous in the home circle, in the club, and in society, frequently become cold, brusque, irascible, and domineering when clothed in a little brief authority. It is one of the peculiarities of office holding that it has this acidulous effect upon so many people, and turns to bonnyclabber the milk of human kindness in so many naturally amiable natures. Civility regarded as a mere business or professional policy is perhaps the next best thing to integrity, and, like integrity, it should redound to the personal, even financial, benefit of its possessor. The uncivil man in professional life is not only an irritant to others, but he must be a discomfort to himself as well.

It is always well to remember, however, that the majority of people are very prone to look upon acts of disinterested kindness as so much weakness artlessly displayed by the tender-hearted, in the same sense as the professional beggar considers a benevolent person a legitimate prey for his class. Selfishness comes natural to the most of mankind, while kindness is a graft from a higher stock. Lady Macbeth deprecated the quality which made her weaker spouse hesitate to commit a murder. The old fable of the husbandman who warmed the frozen serpent into life, only to be bitten by the venomous thing, often finds a counterpart in real life. It is perhaps not too much to say that the average kindness is seldom fully appreciated. The recipient too often forgets the friend and counselor, and sometimes in deep ingratitude refuses to reciprocate when the right opportunity presents itself. Nevertheless, it is written in accepted philosophy that every action has its influence upon ourselves and upon others, and that just as a force set in motion persists, so whatever individual force we exert continues at work, often unseen, long after it has seemingly been forgotten. It is useless, however, to follow this conception into its refinement, but it is sufficient to realize that whatever we do or say may have an important influence upon ourselves or others. It is true that many professional kindly actions and intentions go unrewarded, but we see instructive examples of ample recompense unexpectedly following many of our deeds. Many successful practitioners, if they could trace back to their true sources the cause of their steady advancement, might find it not in their capacities and abilities alone, but in the opportunities to exhibit their capabilities provided for them by those to whom they had formerly appeared in a favorable light.

EDITORIAL NOTES.

The Orthopedics of Nomadic Tribes.

Some of the nomadic tribes inhabiting the interior of Afghanistan, living as they do hard and isolated lives, entirely away from the scientific and medico-surgical progress of the world, maintain to this day some of the most primitive of practices for righting themselves whenever they suffer from accidents involving a disjointing of bones. The method commonly employed by them for the reduction of dislocations is certainly original, and naturally more successful than similar operations upon European or American subjects would be. For the dislocation of the thigh, the unfortunate patient is sweated and starved for three or more days in a dark room, the atmosphere of which is heated by fires kept burning night and day; and the effects of this high temperature are further increased by drenching with copious drafts of warm rice-water or thin gruel. During the interval this treatment is enforced, a fat bullock or buffalo is tied up and fed *ad libitum* with chopped straw flavored with salt, but is rigidly denied a drop of water or other liquid. Usually on the third day the patient is made to ride the animal astride, a felt alone intervening between him and the hide, his feet being drawn down and fastened tightly under the animal's belly by cords passing around the ankles. These preliminaries arranged, the animal is led out to water, where it is allowed to drink so greedily and inordinately that its belly swells to nearly double its former size. The stress produced by this upon the dislocated limb is sufficient to bring the wandering bone back to its socket, or else it produces more serious results, liable to render the sufferer a helpless cripple for life.

The method of reducing a dislocated shoulder is quite as curious and interesting. It is managed thus: The hand of the dislocated member is firmly fixed as closely to the opposite shoulder as it can well be, by cords tied around the wrist. Then between the bend of the elbow and the chest is placed an empty goatskin bag, in common use throughout Oriental countries as a means for carrying water, which is gradually filled. The slowly increasing weight suffices to overcome the resistance of the muscles before they have borne it very long, and as in the previous instance quoted, either betterment or further injury soon results. These water-bags when full weigh close to a hundredweight, and occasionally more than that. For a reduction of dislocation of the ankle-joint, the injured extremity is placed in a hole dug in the ground and covered over with soft earth, firmly pressed down. The limb is then pulled out by force, and with a fair chance of the joint returning to its former shape and position.

ITEMS AND NOTES.

A NEW English naval hospital is to be erected at Chatham.

THE yellow fever outbreak at Santiago has been overcome.

SCHAEFER, the English physiologist, has been called to Edinburgh.

THE attempt to regulate the Christian Scientists in New York has not been a success.

THERE are in England 28,000 medical men; in France 17,738; in the United States 116,000.

AN epidemic of anthrax is now prevailing to a moderate extent in Bedford county, Pennsylvania.

THE French Association of Urinologists will meet in fourth annual session in Paris, October 19 to 21, 1899.

MICHAEL FOSTER, of London, will deliver the next course of Lane Medical Lectures at San Francisco in 1900.

A FARMER near Noblesville, Ind., fifty-two years of age, has never had teeth, and all four of his children are toothless.

ENGLAND, Hungary, and some other countries are trying to enforce stringent regulations for the control of massage establishments.

THE new French minister, De Galiffet, still wears a silver plate in his abdomen to cover a defect caused by a cannon-ball at the siege of Puebla.

ACCORDING to late cablegrams the bubonic plague has spread from Hong-Kong to Mauritius, and from Hong-Kong and Mauritius to Réunion.

IT is said that at the present time there are several life insurance companies in England that take vegetarians at reduced rates, considering them better risks.

PEROXIDE OF HYDROGEN acts rapidly in disintegrating the solid cerumen. In a few minutes after its use the wax can readily be removed from the ear by syringing.

THE British Cancer Society will send Mr. Arthur C. Duffy, M.B., to the United States to investigate what is being done in the way of cancer study in the Buffalo laboratory.

HIPPOCRATES, who lived over 2000 years ago, knew only 234 species or kinds of plants. The number known at the present time by botanists amounts to over 200,000.

PROFESSOR KARL EWALD, editor of the *Berliner Klinische Wochenschrift*, recently celebrated the twenty-fifth anniversary of his connection with the university as privat docent.

SURGEON WOODHULL, at Manila, is reported to have stated that the increased military forces in the Philippine Islands necessitate the employment of forty additional surgeons.

A CORRESPONDENT of the *London Times* tells of a man in Allahabad already in a state of collapse following poisoning by a snake-bite who was cured by an injection of Calmette's serum.

NEXT August, in Dresden, is to be celebrated the centennial of the birth of Vincenz Priesznitz. An international exposition of appliances for hygiene and the care of the sick will be held.

MR. OSCAR F. LACKEY, the first yellow fever patient in this country to be subjected to the serum treatment, was discharged cured from the New York Quarantine Hospital on July 23.

TO Dr. C. Alexander, of Breslau, has been awarded the prize of $60 for the best work suitable for distribution in pamphlet form for the enlightenment of the public in respect to quacks, faith-healers, etc.

THE Alvarenga prize of the College of Physicians of Philadelphia, amounting to $180, for the year 1899, has been awarded to Dr. Robert L. Randolph, of Baltimore, for an essay entitled "The Regeneration of the Crystalline Lens: An Experimental Study."

AT a recent meeting of the Société Médicale des Hôpitaux de Paris, Dr. Lermoyez presented a young girl, aged sixteen years, who for three years had menstruated from the right ear. The discharge was of non-coagulable blood and had a peculiar odor.

THE Johns Hopkins University has just sent a scientific expedition to the Far East to study tropical diseases. Among the places visited will be Yokohama, Kobé, Shanghai, Hong-Kong, Singapore, and Colombo, but most of the actual work of the commission will be done in Manila.

THE dispensary of the Johns Hopkins Hospital is being enlarged by the tearing down of interior walls and the taking in of an alcove twenty feet square. The trustees of the hospital have also decided to equip the hospital with an ice-plant with a capacity of about ten tons daily.

According to the *New York Times*, a Chicago man of wealth, whose name is withheld for the present, is going to use part of his large fortune in erecting a hospital for incurable consumptives as a memorial of his daughter, who died recently of pulmonary tuberculosis.

A number of druggists, confectioners, and manufacturers of fruit syrups have been arraigned in New York City charged with selling impure syrups for soda water and ice cream. There was an entire absence of fruit juice, and the coloring matter was produced by aniline dyes.

According to the *Cincinnati Lancet-Clinic*, Dr. A. Ravogli has been knighted, with the title of Cavaliere, by King Humbert of Italy. The good doctor is to be congratulated, while King Humbert may rest assured the title is most worthily bestowed. Dr. Ravogli has long been the Italian consul in Cincinnati.

An international congress for childhood will be held at Budapest, Hungary, during the latter part of next September. It will continue through five days, and there will be five sections. In addition there will be sections having no immediate connection with medicine—judicial, pedagogic, charitable, and philanthropic.

The average monthly death-rate in Santiago, Cuba, under the Spanish régime is said to have been 250, but under improved sanitary measures carried out since the occupation by American troops, the mortality has decreased to 112 per month and is constantly growing less, notwithstanding that a small epidemic of yellow fever has affected that district.

For the ten years previous to 1895 the average death-rate from smallpox in Germany was 116, the greater of the total number occurring in the earlier period of the decade. In 1895 there were twenty-seven deaths; in 1896, ten; in 1897, five. In that country the law requires vaccination and revaccination, and the law is carried out.

An obstetric attendant upon royalty in most European conntries is required to deny himself attendance upon all other patients for a period of thirty days before the time of expected delivery of the royal personage, and for thirty days thereafter. Daily calls are made, and every antiseptic care exercised. The reward is ample, so that every royal obstetrician can well afford to be such.

The Italian Society of Internal Medicine will meet in annual session at Rome, October 23 to 26, under the presidency of Professor Baccelli, Minister of Public Instruction. The subjects selected for

discussion are: (1) Chlorosis; (2) The Pathology of the Pancreas. The former will be opened by Professors A. Riva and P. Castellino; the latter by Professors L. Devote and U. Gabbi.

The electric exposition at Como, Italy, in honor of Volta's discovery of the electric pile, was destroyed by the ignition of an electric spark. The loss is complete, and includes the original models of all machines and instruments invented by Italians, as well as the priceless Volta relics, his machines, letters, etc., and specimens of the latest and most improved appliances of electricity to medicine and surgery.

On the 9th ult. Dr. Kocher, of Berne, Switzerland, removed the whole of the stomach of a woman aged forty, for carcinoma of the pylorus. The duodenum and esophagus were united, and the abdominal wound was sutured, a small glass drainage-tube having been inserted. The patient lived three days and a half and then suddenly died. At the post-mortem examination some peritonitis was found as the result of necrosis of a small portion of the wall of the transverse colon.

Dr. Lassallette, of Pau, was condemned last year to two months' imprisonment for "homicide par imprudence," as a pair of forceps was found in the abdomen of a woman who had died a few hours after he had operated on her for the removal of a large fibroma. After completing his term he produced evidence that the patient's death was not due to the fact cited, but that she had been poisoned with nux vomica. The case is now in the hands of the experts, according to the *Gazette Médicale de Paris* of July 8.

One of the last acts of the late Czarevitch, as we learn from the newspapers, was to publish a set of rules for consumptives. Himself a victim, he followed these rules most rigidly; the fear of imparting his disease became almost a mania with him, and none of his attendants were allowed to be on duty with him over two hours a day; the rest of the time they were obliged to spend looking after their health. He had collected, it is said, an extensive library on the subject of tuberculosis, which seems to have been the subject that most occupied his attention.

The annual meeting of the American Electro-Therapeutic Association is to be held on September 19, 20, and 21, in the city of Washington, under the presidency of Dr. F. B. Bishop. Papers have thus far been promised from Dr. R G. Nunn, A. D. Rockwell, Margaret A. Cleaves, F. J. Leviseur, Walter White, Robert Reyburn, G. A. Corson, C. O. Files, J. H. Kellogg, John A. Licthy, W. W. Scheppegrell, L.

Howe, E. Wende, F. B. Bishop, Robert Newman, W. J. Herdman, G. B. Massey, Professor Bergone of Bordeaux, and Profs. Apostoli and Dolbear, of Paris.

ACCORDING to the *New York Medical Record*, several patients in one of the convalescent wards at Bellevue were the victims recently of accidental phosphorus poisoning. One of the patients, in reaching for a glass, overturned a box of matches, throwing half its contents into a can of tea which was just to be served to the inmates of the ward. The patient whose duty it was to distribute the tea noticed the matches floating about, but thought nothing of it, and merely fished them out and went on with the distribution. Soon after drinking the tea several of the patients became very sick, but the cause of the trouble was quickly discovered, and prompt medical assistance averted any serious consequences.

ACCORDING to the *Journal of the American Medical Association*, the Government of Colombia has officially requested the presence and advice of the Swedish leprologist, A. Hansen, in its struggle against the high tide of leprosy that threatens to overwhelm the land. He has not decided yet whether to undertake the task or not. The conditions are by no means so favorable as in Norway, where the number of lepers is comparatively small and the government is pecuniarily equipped. It is very different in Colombia, with its bankrupt and unsettled government and one per cent of its entire population of three and one-fourth millions already affected. The scheme for establishing a great leprosorium on the island of Coiba was found impracticable. A recent communication states that the disease has spread to a frightful extent among the wealthier white families.

THE Paris new School of Medicine, which was commenced in 1877, will be finished for the opening of the Exhibition of 1900. The classes have not been interrupted during the construction of the new school. As the new lecture-rooms and laboratories were finished the old ones were abandoned, and the classes and researches were carried on under more favorable conditions. In 1884 the first set of buildings in the Rue Hautefeuille was finished and occupied. In 1893 the chemical and pharmacological lecture-rooms and laboratories were installed there. In 1888 the library was removed to the block of buildings in the Boulevard St. Germain. In 1889 the superb suite of rooms now occupied by the Dean of the Paris Faculty, the secretary, and the officials was finished. The new School of Medicine exceeds the limits of the old. One part of it stands on historic ground. Marat's bedroom was exactly over the room which is now the Dean's library.

NEW PUBLICATIONS.

THE STUDY OF THE HAND.

It is gratifying to find that the very favorable opinion formed by this journal regarding Dr. Blake's book on the hand has been justified in the speedy appearance of a second and much enlarged edition. The work has been practically rewritten and is now an exceedingly useful treatise concerning the investigation of the hand for signs of local and general disease. In addition to the general description regarding the conditions of the hand in health and disease, the reader will find a vast amount of curious and exceptional information. The book is written in a singularly lucid style, and is copiously illustrated. It will be much appreciated by those who love to discover the fine points which may lead to successful diagnosis.

The Study of the Hand for Indications of Local and General Disease. By Edward Blake, M.D. Second Edition. London: Henry J. Glaisher, 57 Wigmore Street, Cavendish Square, W.; New York: G. P. Putnam's Sons, 1899.

ESSENTIALS OF THE MODERN TREATMENT OF DISEASE.

From far-away India comes a very deserving addition to medical literature in Dr. Nadkarni's compendium of medical treatment. The approved methods of treatment of each disease have been selected for description, and the one that is generally accepted as the best and most successful has been placed first on the list. This little book will be found an excellent guide to the physician desirous of familiarizing himself with all the possible resources of medical science for the therapeutical management of his cases.

Essentials of Modern Treatment of Disease. For the Use of Practitioners. (Alphabetically Arranged for Ready Reference.) By K. M. Nadkarni, Recently Associate Editor, *Indian Medico-Chirurgical Review*, etc. Madras: N. K. Rao & Co.; London: Bailliere, Tindall & Cox, 20 and 21 King William Street, Strand.

THE NEWER REMEDIES.

It is impossible for the physician to keep in touch with the numberless additions that are constantly being made to the Materia Medica without some such systematically arranged book as Dr. Coblentz has prepared. The work contains a great deal that is not found in ordinary text-books, and is an essential guide to both physician and druggist in determining the character of a large number of remedies. It clearly elucidates the properties of the substances mentioned.

The Newer Remedies. A Reference Manual for Physicians, Pharmacists, and Students. By Virgil Coblentz, A.M., Phar.M. Third Edition, Revised and Very Much Enlarged. Philadelphia: P. Blakiston's Son & Co., 1899.

GOLDEN RULES.

Attention has before been called to these excellent epitomes of medical wisdom. The last number is one on Medicine. These little books are excellent for the student to carry in his pocket and read whenever opportunity permits. They are intensely practical and clinical in spirit.

Golden Rules of Medical Practice. By Arthur Henry Evans, M.D., B.S. (Lond.), F.R.C.S. (Eng.). "Golden Rules" Series, No. IV. Bristol: John Wright & Co.; London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Movable Kidney.

D. Wallace, F.R.C.S. Ed. (*Scottish Medical and Surgical Journal*), says he believes post-mortem statistics of mobility to be fallacious, as the kidney is more fixed after death than during life, and that no satisfactory explanation has been given either of the reason for the greater frequency of the occurrence on the right side as compared with the left, nor of the causes which lead to kidney mobility. The theory that it is more common in women of the poorer classes, who have borne many children at short intervals, the observations of several authors have failed to substantiate, and in his own cases requiring treatment (fourteen in number), thirteen were females, and of these seven were nulliparous, and only one of the others had borne several children and belonged to the poorer classes.

The loss of fat, supposed to be a predisposing cause, he is more inclined to believe to be in reality the result, as it certainly is in the cases with gastrointestinal symptoms. The condition comes on gradually in the majority of cases and gets progressively worse, and the exact time of onset is rarely known, unless due to traumatism.

When palpating the lumbar region for the kidney we may fail to find it, because at the time of examination it may be low down in the iliac fossa—a source of error to be borne in mind.

Clinically, the author groups the symptoms under four heads: (1) Simple mobility without symptoms; (2) pain, described as a sensation of aching and dragging on the affected side; (3) renal pain, which may be accompanied by hematuria, pyuria, or intermittent hydronephrosis, but not necessarily so; (4) the gastrointestinal disturbances accompanied by, or ending in, neurasthenia. The symptoms, however, are not always commensurate to the degree of mobility.

The affected kidney is usually healthy, and the symptoms, as a rule, wholly subside after fixation of the kidney.

Wallace accepts Kendal Frank's explanation of symptoms: (1) Some symptoms are common to both kidneys, as the dragging pain, sense of weight, neuralgic pains, fatigue, and debility; (2) some symptoms belong exclusively to mobility of the right kidney, the gastric crises, indigestion, flatulence, vomiting, and pain, which come on about two hours after eating. The symptoms peculiar to the left kidney are not pointed out.

With regard to treatment, three classes are to be recognized: (1) Those in which no treatment is necessary, the condition being discovered by accident; (2) those relieved by the wearing of a pad; (3) those requiring operation—nephropexy. For a pad the author prefers an air-pad, fixed to the corset, and placed in position while the kidney is known to be in place.

Of eight cases operated upon by the author, three belonged to the extreme gastrointestinal type, with marked emaciation. Of these, one was unmarried and two were nulliparous.

His method of operation is to pass three deep sutures of strong catgut through the kidney substance, using MacEwan's herniotomy needle, and stitch the organ to the posterior abdominal wall as high up as possible. He freely separates and removes the perirenal fat, but does not scarify nor strip the capsule proper. In all he has obtained firm union.

Operative Treatment of Relapsing Typhlitis.

A. W. Minin (*Vratch*, No. 5, February, 1899; *British Medical Journal*, May 27, 1899) calls attention to the fact, which is so often overlooked in practice, that in many instances of so-called typhlitis the affection is in reality due to some appendicular mischief, and thus represents a condition that might under favorable circumstances be greatly relieved by a timely operation. He reports the case of a man, aged twenty-four, in whom no fewer than four attacks had occurred in the period of eighteen months. After the subsidence of the last attack, and during a period of perfect freedom from all symptoms, the author performed laparotomy and removed the diseased appendix, which was found to be adherent to the lower surface of the cæcum, and partly entirely obliterated and partly converted into a cystic sac containing a dark, thick fluid. Within a comparatively short period the patient made a complete recovery, and has so far remained free from further relapses. As regards the technique of the operation, the same incision was employed as for ligaturing the iliac artery, but with the difference that in Minin's case the incision had to be extended for several centimeters further upwards in order to expose the vermiform appendix, which is often difficult to find. In conclusion, the author mentions the following indications as justifying surgical interference: (1) The patient's expressed wish for radical treatment. (2) His being the subject of frequent attacks. (3) The author agrees with Kummel's suggestion as to the time of operating, and regards the occurrence of a third attack as calling for surgical interference. (4) The operation should be undertaken during a period of quiescence following an attack.

Surgical Hints.

The August number of the *International Journal of Surgery* contains these timely surgical hints:

In all amputations make periosteal flaps whenever it is possible. They not only protect the bone, but they prevent adherence of the skin, a complication which gives the patient an unpleasant sense of tension, sometimes amounting to very distinct pain.

It is an excellent idea to preserve certain pathological specimens, such as diseased ovaries and testicles. Their removal sometimes leads to disputes and to unjust accusations, and the possession of the specimens may be of great value in lawsuits for malpractice, etc.

Don't neglect so-called growing pains. While they are usually an indication of myalgia or rheumatism, and as such amenable to appropriate treatment, they sometimes indicate beginning disease of the joints and bones of the lower extremity, and should be very carefully investigated.

It is well to remember that in eclampsia there is greater danger than usual of poisoning by the intra-uterine employment of toxic substances, such as mercuric bichloride and carbolic acid. It is best to employ nothing but non-toxic substances, such as the saline or the Thiersch's solution.

Fish bones embedded in the pharynx often escape observation by the laryngeal mirror. Spray a little cocaine solution to secure tolerance and examine carefully with the finger. Once you have felt it you may still be unable to see it with the mirror, but you can usually guide the extracting forceps along the palpating finger and extract the offending bone.

Gastric Ulcer.

R. B. Greenough and Eliot P. Joslin (*American Journal of the Medical Sciences*, August, 1899), who have observed nearly 200 cases of gastric ulcer occurring in the Massachusetts General Hospital, make the following conclusions: It is five times as common in women as in men. The average age in men is thirty-seven years; in women twenty-seven. Hemorrhage was present in eighty-one per cent of the cases. It caused the death of seventeen per cent of the male patients, with only 1.27 per cent of the females. No women under thirty years died of hemorrhage from gastric ulcer during that period. The blood was that of a chlorotic type of anemia. Perforation occurred in 3.2 per cent of the cases, and none of these patients left the hospital alive. Of 114 patients eighty per cent were discharged cured or relieved, but at the end of an average period of five years only forty per cent

remained well. The mortality at the same time (due to gastric disease) was twenty per cent; among males it was thirty per cent, with the females nine per cent. The excessive mortality of the ulcer among men, its occurrence in life a decade later than in women, and the absence of fatal cases of hemorrhage in females, point to a difference of the ulcer in the two sexes. The mortality of eight per cent and the failure of medical treatment to effect a lasting cure occurring in sixty per cent of the patients indicate the need of surgical intervention in other than emergency cases of this disease.

Remarks on the Treatment of Clubfoot, Based on Personal Experience of Three Hundred Cases.

McKenzie (*Canada Journal of Medicine and Surgery*, May, 1899) summarizes his views as to the possibility and results of treatment at different periods as follows:

1. The prognosis in ordinary non-paralytic clubfoot is good.

2. In children the restoration of form should be perfect, and function should closely approximate the normal.

3. Restrictive methods, either by dressings or apparatus, should be as little employed as possible.

4. Persistent manipulation improves function and development.

5. Operative treatment must be thorough. No part of the correction of deformity should be left, hoping that mechanical means will complete the work.

6. Intelligent and long-continued after-treatment is essential to a final good result. Properly constructed boots should be worn, and the foot retained in the corrected position at night.

7. Age is no bar to successful treatment. Eminently satisfactory results may be obtained in adult life. Even in the case of adults the more heroic methods of operation in many instances are not called for.

8. The prognosis in paralytic cases will vary according to the nature and degree of paralysis.

Exstrophy of the Bladder—Operative Treatment, with Special Reference to Maydl's Operation.

Rudolph Matas (*Journal of the American Medical Association*, July 29, 1899) says that all autoplastic operations proposed for the cure of exstrophy of the bladder are unsatisfactory, and at best simply palliative. Of all the radical methods which involve an excision of the bladder and a transplantation of the ureters to the rectum, Maydl's operation offers the best conditions for the complete correction of the

associate epispadias. Notwithstanding the comparatively large number of successful cases accredited to this method, its relation is not yet fully ascertained, though the ratio as obtained from published cases (over. thirteen per cent) establishes the superiority of this method above all others from the prognostic point of view. Notwithstanding the apparent theoretic simplicity of its technique, Maydl's operation is a difficult, laborious, and in many respects a dangerous one, and should only be undertaken by those who have thoroughly familiarized themselves with its difficulties by special training in abdominal surgery, supplemented, if possible, by experimental work. It should not be applied indiscriminately to all cases, but only to those patients whose general condition is such as to warrant a long, tedious operation likely to be attended by serious shock, and whose eliminating organs, especially the kidneys, are normal and capable of effective elimination.

MEDICINE.

Intermitting Albuminuria of Adolescents.

At a recent meeting of the Berlin Society for Psychiatry (*Medical Press*, July 19, 1899) Dr. Prebram discussed the intermitting albuminuria of adolescents. He said it was a striking fact that frequently in youthful and normal individuals at some parts of the day albumin might be found in the urine, and especially after bodily exertions. There were variations in this tendency. Movements of the upper extremities generally had less influence—for example, being less in violin playing excepting when the player stood. If such cases were observed long enough, it would be seen that with the intermitting growth of the youthful body the tendency diminished, and increased in the periods when growing persons began to make awkward movements, got large hands and feet, and gradually disappeared when the lengthening of the body made them of adequate size. How far the albuminuria was physiological was undecided. Cylindruria was not observed for years. In one case severe scarlatina was not followed by nephritis. With proper treatment and gradually developed movements, no albumin was traceable even after dancing, tennis playing, etc.

Cystinuria.

Moreigne (*Arch. de Méd. Expér.*, etc., March, 1898; *Medical Review of Reviews*, July, 1899) concludes his elaborate study by stating that cystinuria is less rare than has been supposed, and that

the principal phenomenon is the occurrence of the cystin in the urine, although both renal and vesical calculi may form at times. Cystin occurs, as a rule, in relatively normal urine. Tyrosin usually coexists in the sediment, and leucine in solution. Moreigne finds the proportion of uric acid increased in cystinuria. The whole state of the economy points to retarded nutrition and suboxidation, the nitrogenous coefficient being reduced with diminished oxidation of the sulphur and increased proportion of extractive matter, the two diamins, cadaverin and putrescin, being present. According to Moreigne, everything points to suboxidation, to anaerobic life of the cells. He rejects any hypothesis pointing to the formation of cystin and its congeners by intestinal fermentation. The disease or state of cystinuria is a diathesis, and to combat it we must attempt in every way to bring about increased intraorganic oxidation. To compass this end Moreigne advises nerve stimulants which might induce increased interchange of gases (strychnine), exercise in the open air, massage, a course of Vichy waters, etc.

Chronic Malarial Nephritis.

Charles W. Larned, in an article under this title in the July number of the *Johns Hopkins Hospital Bulletin*, said that in some localities malarial fever should be given a prominent position in the etiology of chronic as well as acute nephritis, and that in all cases of malarial fever the urine should be closely watched. Blood examinations should be made in all cases of nephritis occurring in those who have visited or lived in a malarial district, as it often happens that the severe grade of nephritis resulting may mask entirely the clinical picture of malarial fever.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Thyroid Pathology and Therapeutics.

Dr. Blum, at a recent meeting of the Medical Association of Berlin (*Medical Press*, July 26, 1899), urged that the thyroid should be removed from the list of glandular organs. It elaborated no physiologically active secretion, but seized upon a poison continually secreted in the system by some capturing substance. The tissue of the thyroid thus served for the arrest of some poisonous material produced by the action of the vital processes. The activity of the fettered virus was

different from that of the free toxins. By the iodizing process taking place in the thyroid the harmful agent deposited there as a toxalbumin was weakened. By perfect saturation with iodine it lost its poisonous properties. The free poison caused severe and frequent epileptiform convulsions, very frequently cachexia, and sometimes distinct psychical disturbances. Examination of a dog destroyed by thyroidectomy showed changes in the ganglionic cells of the cord and brain which could be identified by Nissl's method. The disturbances when the poison was passed into the system by inunction were of another kind. They consisted chiefly in alteration in tissue changes (emaciation, decomposition of albumin and nuclei, and liquefaction of the fat), restlessness, and palpitation of the heart. Convulsive conditions had never been observed. The quantity of thyroid substance absorbed could be determined by the administration of iodine. The iodine of the iodine-containing substance was estimated quantitatively. In many days the toxic effect of the thyroid substance administered still acted alternatively on the tissue change when all the iodine given had been again passed off. Such an animal when given thyroid, besides the symptoms mentioned, always had a long continuing glycosuria, and when cane-sugar was given it excreted levulose. The same animal when phlorizin was given with the same diet excreted dextrose.

As regarded the so-called thyroid therapeutics in myxedema, thyroid extract might act in two different ways—in the one it could relieve the organs of abnormal deposits; further, the capturing substance contained in the thyroid body could fix the freely circulating toxin in the myxedematous individual and at least in part render it harmless. In struma and obesity the administration of thyroid was best abstained from, because while the substance was incorporated, which must be determined by the excretion of iodine in the urine, symptoms of poisoning could not be excluded. In cases of goitre other preparations of iodine, especially the non-poisonous iodine albumin (iodalbacid), should be first tried. In obesity the proper dietetic measures should have the preference.

Some Objections to the Neuron Theory.

Dr. Paton (*Johns Hopkins Hospital Bulletin*, July, 1899) says that the investigations of Apathy, Bethe, and Nissl have shown that the ganglion cells in the spinal cord and brain contain a specific fibrillar substance essentially different from the protoplasm of the cell body and its processes. This substance can be stained by several different methods. Little is known of its origin. It may be shown to be an integral part of the ganglion cell, or it may develop from other cells

in the nervous system; or it has been suggested that it may be the product of both kinds of cells.

Until it has been determined histogenetically that the fibrillary substance is a part of the ganglion cell, it is an assumption to speak of these cells as units and individuals. The picture of the ganglion cell, obtained by the use of Nissl's methylene blue method, is the negative of that given by Bethe's new stain. The achromatic tracts in the first correspond to the colored tracts or fibrils in the second specimen. Nissl believes that the fibrillary substance is present not only in the cells, but exists in large masses in the intercellular substance, and is one of the important constituents of the gray substance.

In the main the fibrils follow the distribution of the dendrites and axons. The life of the fibrils undoubtedly depends upon the preservation of the myelin sheath. There is nothing revolutionary in the new discoveries in relation to the studies of the degeneration of nerves. Little has been done in studying degenerations. Bethe has cut peripheral nerves and found that the fibrils degenerated, and that in a short time there is nothing left but granular masses. There is a great deal of interesting work to be done on this subject. Nissl emphasizes the importance of the nerve cell as a nutritive center. If later the fibrils are proved to develop in the nerve cell, and not from other cells, it will no longer be an assumption to speak of the nerve cell as a unit.

THERAPEUTICS.

Quinine in Malaria.

George Dock, M.D., in an article under this heading, in the *Journal of the American Medical Association* of July 29, 1899, says that it is unnecessary to give large doses of quinine. Fifteen grains a day may be looked upon as the average dose in ordinary cases. In the severe and more obstinate estivo-autumnal forms, twenty grains a day may be taken as a dose. The writer states that the question as to whether the whole dose should be given at once, or divided and given at intervals, is still a question to be settled. He says from his experience that in a tertian or quartan intermittent or any complication or duplication of these forms quinine should be given in the decline of the paroxysm, if possible, or not later than at the end of the apyrexia. The difference depends upon the time the patient is seen or the diagnosis made. The dose should be given at one time or in parts at short intervals, in such a form that absorption may be confidently expected. In an ordinary single infection, when the drug is given in the decline, there will not be another paroxysm. In double infections

there may be a paroxysm, often milder than the preceding. If there is a rise of temperature of more than one degree, or if the blood shows parasites, a second dose should be given also in the decline, and if necessary even a third or more. After the temperature falls, no quinine need be given for the specific effect, and if it be used as a tonic, not more than two grains three times a day should be taken. The evidence of the decline of temperature is best based on the thermometer used every hour after the chill. But in case the characteristic profuse swelling occurs it is a sufficiently accurate guide, and the great changes of the body following sweating probably assist in the absorption of the drug. In the remittent or estivo-autumnal fevers the intervals are not so clearly defined as in the tertian and quartan infections. If they are, the decline of the fever can be recoguized by the use of the thermometer or improvement in the subjective sensations. In such cases the quinine should be given in doses of five to ten grains, according to the severity of the case, at intervals of four to six hours, and until a marked remission occurs; and then the daily intermittent dose be given until the fever disappears, or better, until the condition of the blood shows that quinine is not indicated.

The Treatment of Boils and Carbuncles.

W. O. Stillman (*International Journal of Surgery*, August, 1899) says that from his experience hypodermic antiseptic injections into the very base of a boil or carbuncle, early in its history, are practically an unfailing means for aborting an attack, however severe. If a boil is small one injection, or two from opposite directions, carried well in from points on the outer margin of the indurated area, are commonly sufficient to kill the morbid process. In the case of a carbuncle it may require four or even more injections at one time. It is not usually necessary to repeat the injections, although occasionally a second and even a third treatment may be necessary. By carrying the needle well into the middle of the boil near the base the injection will escape through the crown of the boil if suppuration is well begun, and thus a larger amount can be used with safety than at the very outset, when less in fact is needed. It is commonly practicable to wash out the cavity with a sharp-pointed syringe and an antiseptic solution daily after the first treatment, unless the boil is aborted at the very onset without perceptible suppuration or necrosis of tissues. The after-treatment consists in the application of cloths wrung out from hot but weak bichloride solution until the inflammation has disappeared, and all necrosed tissue has come away. Then a dry antiseptic dressing suffices.

In regard to the injection employed, the writer first used a three- to five-per-cent carbolic acid solution in water. Later he tried the same agent in olive oil, and also in glycerin, with increased strength, bearing in mind the toxic possibilities of the carbolic acid, and determining the amount used accordingly. Latterly he has employed lysol, as being less poisonous and more efficient, both for the hypodermic use and the later dressing.

With respect to internal medication the usual tonics, etc., often accompanied by calcium sulphide or sulphuric acid, have been employed.

Microcidine.

McKay (*Intercolonial Medical Journal*, March 20, 1899), as a result of three years' use, praises this agent as a germicide in obstetrical work. It is used in the strength of 4:1000 as a vaginal or intra-uterine douche. The advantages claimed are: (1) It is not toxic; (2) it does not coagulate albumin; (3) excepting albumin, it does not attack instruments; (4) as a germicide it ranks next to bichloride; (5) its solutions have an oily feel. It is prepared by dissolving one part of caustic soda in two of water. To this is added two parts of naphtha B, and the fluid evaporated. The solid microcidine thus prepared is stored in dark-colored bottles.

PEDIATRICS.

UNDER THE DIRECTION OF CHARLES G. JENNINGS, M.D.,

Professor of Practice of Medicine and Clinical Diseases of Children, Detroit College of Medicine.

The Early Training of Blind Children.

W. E. Drummond, M.B., of Edinburgh, in *Pediatrics* of June 15, 1899, says: "Training should not be regarded as beginning when the child is sent to school. It should begin as early as possible—at birth, one may almost say, in the case of children born blind; as soon as sight is lost in the case of those becoming blind at a later date. The proper method of training can be expressed in a few words. The blind child should, so far as possible, be treated exactly as if it were able to see. During infancy toys should be given it to play with. As early as possible it should be allowed to creep about by itself and investigate its surroundings. When it begins to try to walk it should be encouraged to do so. It must examine everything in the room and find out by experience, as the seeing child does, that it is inadvisable

to collide with the chairs or to knock the head against the leg of the table. As the child grows, it must be taught to do anything that it would learn if it could see—to open and shut the door of the room, to find its way about the house, to fetch its own chair at meal-times, to dress and undress, and to feed itself. On no account should obstacles be taken out of its way, beyond seeing that it does not meet with any serious accident. For example, if the child is seen to be going to walk against a chair, the chair should not be taken out of his way, nor should he be warned that it is in the way. If he is ever to learn to go about alone with confidence, he must learn to do so by experience. It is wonderful with what confidence the blind, brought up in this way, learn to make their way about. They seem to know, by a sort of intuition, when they are approaching any obstacle, and avoid it as if they could see it. Samples of this confidence are common enough. The writer knows of a blind gentleman who is an accomplished skater, and who, on one occasion, saved a man from drowning by jumping from a pier and swimming to him, guided only by his cries."

OPHTHALMOLOGY AND OTOLOGY

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The Prevention of Eye Accidents Occurring in Trades.

At the sixty-seventh annual meeting of the British Medical Association, held at Portsmouth, England, August 1, 2, 3, and 4, 1899, Dr. Simeon Snell, president of the section, said: "No one can have seen much of ophthalmic practice in such a large industrial center without being painfully aware of the enormous destruction to sight occasioned annually by accident. It is difficult, of course, to obtain anything like accurate statistics. It is necessary to exclude entirely all reference to accidents caused in every-day civil life, much as could be said about their prevention."

He offers the following suggestions as to the means for protection to workmen:

1. The grinder will find that large glasses made of plain glass, or indeed his own spectacles, should his refraction require their use, will afford great protection. Or he may use other protectors made with glass in front and gauze surrounding it.

2. The use of protectors should be compulsory for those workers in iron or steel whose employment renders them liable to be injured by iron or steel splinters, or who are exposed to danger from molten metal.

The gauze eye-shield described will, Dr. Snell believes, answer the purpose well. The cost is low, and it is worth the employers' while to supply their men with them. Other means to be adopted are: (*a*) The use of a pneumatic chipper whenever practicable, and (*b*) the proper arranging of the men at their work; and the use of screens so as to avoid injury to their fellow workmen and the passers-by.

Otitis Media and Earache in Lobar Pneumonia of Children.

Dr. J. S. Meltzer, in the *Philadelphia Medical Journal* of August 5, 1899, concludes: (1) Otitis media is an extremely frequent disease in children, especially in poorly-nourished ones. (2) Bronchopneumonia is very frequently complicated with otitis media. (3) In lobar pneumonia of children purulent otitis media is at least very rare, possibly because the pneumonia by its hyperleucocytosis acts as a derivative upon the otitis. (4) Many cases of lobar pneumonia begin with an earache, which disappears gradually. (5) The hypothesis is offered that possibly this is only a sympathetic pain of the chronically inflamed drum. (6) In offering this hypothesis the idea is introduced of a summation within the central organ between the effects of an abrupt and a continuous stimulus; a conception which might prove to be fruitful in pathology, in which all the chronic and many acute inflammations are the seat of such continuous nerve stimulations.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

The Position of the Gravid Uterus at the Onset of Labor.

In the *Glasgow Medical Journal* for July, 1899, Dr. A. Maclennan draws from his experience the following conclusions: (1) Right flexion with right rotation is by far the commonest deviation. No case of the converse was met with. (2) Flexion is caused by purely mechanical conditions, and it will tend to produce rotation to the same side. (3) Flexion has no relationship with presentation or position of the fetus. (4) Rotation is due to laxness of the uterine ligaments, and possibly to an irregular contraction, but not to an irregular arrangement of the muscular fibers. It may replace lateroflexion as an attempt at accommodation. One case showed in the space of three days, first symmetry, then rotation to the right, and finally rotation to the left. (5) Only two cases of flexion without

rotation occurred, and these were complicated by contracted pelvis. (6) An absolutely symmetrically placed uterus is more common in primiparæ, but one medianly placed, if accompanied by rotation, is commoner in multiparæ.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

The Rôle of Pus Organisms in Diseases of the Skin.

At the last meeting of the American Dermatological Association, Dr. G. T. Elliot, of New York, in opening the discussion on the above subject, stated that the causes of purulent dermatoses are usually of a known chemical or microbic nature. Cutaneous infection occurs by metastasis from the interior of the body, or directly by bacteria finding an entrance through the cutaneous follicles. Upon the hairy scalp, beneath the nails, and in the perigenital region the saprophytic staphylococci can be found in large numbers. The staphylococcus pyogenes aureus or albus, or streptococcus pyogenes, is responsible for the abscesses of the skin and subcutaneous tissue. Phlegmon is probably caused by the streptococcus pyogenes. Carbuncle is due to the ordinary streptococcus, though other writers believe it to be due to a specific organism. To the action of the staphylococcus aureus is due the furuncle. Impetigo vulgaris is produced by an ochre-yellow coccus, called by Unna the impetigococcus. Folliculitis of the lanago hairs is caused by the staphylococcus, as is also acne vulgaris, according to French writers; in which category is also placed ecthyma. According to Sabourand certain tinlæ in the horse produce pus. As an instance of cutaneous infection by metastasis, the discovery of Neissler's gonococcus in a lesion of furunculitis in one suffering from gonorrhea is cited. Dr. Elliot believes that other processes besides the recognized pyogenic cocci are capable of producing pus, and that non-pyogenic organisms are capable, under certain conditions, of acquiring pus-producing properties.

Gastric Origin of Skin Disease.

M. Robin (*Medical Press and Circular*, July 26, 1899) says that for a long time clinicians have suspected that certain forms of dyspepsia played a rôle in the genesis of some skin diseases. Out of 422 dyspeptic patients studied by him, 129 presented acne, eczema,

lichen, prurigo, urticaria, furunculosis, herpes, etc. On the other hand, he particularly studied the gastric secretions of several patients suffering from prurigo or simple eczema, but who did not present any dyspeptic symptoms, and he found that they suffered, nevertheless, from a form of dyspepsia due to lactic or butyric fermentation. Consequently, he was convinced that these fermentations acted on the skin through a trouble of nutrition (insufficiency of the general exchanges, increase of demineralization, etc.), or by elimination of lactic acid in the perspiration. The treatment should naturally be addressed to the special form of the dyspepsia. If the fermentation be due to the presence of lactic acid, the fluorides should be ordered, while sulphur, iodide of sulphur, or iodide of bismuth, are the best agents against the butyric acid form.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH., Attending Neurologist to Harper Hospital.

A Study of the Nerve Cell Changes of the Spinal Cord in a Case of Epidemic Cerebrospinal Meningitis.

Sidney I. Schwab (*Medical Review*, July 8, 1899), from his study of the changes that take place in the nerve cells of the spinal cord in cases of epidemic cerebrospinal meningitis, draws the following conclusions:

1. In epidemic cerebrospinal meningitis we have to do with a process which affects the sensory cells.

2. The Clark system of cells shows a greater tendency to react to the disease than any other system of cells.

3. This tendency cannot be explained by means of the effect of the mechanical pressure of the exudate.

4. The degeneration of these cells is caused by a toxin which originates from the specific agent of the disease, the micrococcus intracellularis meningitidis of Weichselbaum, which has a special affinity, first, for all sensory cells; secondly, particularly for the cells of Clark's column, therein showing a possible specific action towards these cells.

5. If the exudate does exert any pressure, it is to be regarded as affecting the cells indirectly—*i.e.*, it diminishes the normal resistance of the cells which come within the line of its force, and the cells so acted upon react easier to the toxic material than the others.

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ORIGINAL CONTRIBUTIONS.

INSECTS AS A MEANS OF SPREADING INFECTIOUS DISEASES.

BY A. G. ELLIS, M.D., PHILADELPHIA.

As the nature and cause of the infectious diseases are being rendered clearer by the great advances made in bacteriology, greater efforts are made to prevent their propagation. In these days of antisepsis the persons and clothes of attendants, instruments, dressings, etc., receive scrupulous attention in order that they may not be the carriers of contagion or infection. Patients suffering from contagious diseases are isolated that they may not be the focus from which will radiate an epidemic. Yet with all these precautions diseases spread at times in unaccountable ways. Within comparatively recent years much attention has been given to the part played by insects in the carrying of contagion, both as simple fomites and as intermediary hosts in some instances.

A notable instance of the latter class is the case of the mosquito; for some time thought to have an active part in the spread of malaria, its true rôle has only recently been determined. Indeed, some writers do not believe that the chain of evidence is yet complete which proves the mosquito an intermediary host for the malarial organism. From the researches of several observers—notably those in India and Italy—and the results they have obtained, however, it seems a conclusion that cannot reasonably be doubted; at least, if the extra-corporeal existence of the malarial parasite and the true part taken by the mosquito in connection with it has not been fully solved, such advances have been made that the final solution may soon be hoped for.

Manson has for some time believed that the flagella of the malarial parasite are not degenerate parts of the organism or simply means

of locomotion, but are designed to perpetuate the organism outside the human body. Thayer (Progressive Medicine, vol. i) gives an extended account of Ross's experiments with the view of determining the truth of this theory, and also the results of other investigators along the same lines. In the stomach-wall of mosquitos fed upon the blood of persons suffering with malarial fever were found small bodies containing pigment similar to that in the malarial parasite taken from the human body direct.

Experiments were then made with proteosoma, organisms in birds which closely resemble the malarial parasite of man. Mosquitoes were fed upon the blood of birds which contained mature proteosoma. The results of examinations of such mosquitoes, and also of those fed on blood containing the halteridium, another bird parasite, have at present reached this stage: The organism when it enters the stomach of the mosquito develops flagella which detach themselves from the parent, if it may be so called, and being endowed with motion move about and finally enter another parasite. What the process is that takes place is not known, but it is apparently one of fertilization. Whatever the action taking place may be, the organism absorbing these flagella becomes motile and penetrates to a certain depth the stomach wall. In the course of two or three days pigment corresponding to that in the organisms in the blood is noticed in the bodies embedded in the tissue, and they increase in size until they protrude into the stomach cavity. About the eighth or ninth day these apparently rupture, setting free great numbers of minute, spindle-shaped, somewhat flattened bodies. Large numbers of these were found in the blood of mosquitoes at a time when such rupture was supposed to have occurred. The function of these "spores" has not yet been determined, but an interesting fact was further discovered by Ross. An anatomical structure of the mosquito hitherto undescribed and apparently representing a venomo-salivary gland was found, and this throws further light on the inoculation theory of malaria. "This organ lies in the neck or anterior part of the thorax of the mosquito, and consists of a number of separate lobes. Each lobe is made up of numerous large cells clustered around a central duct and contained within a limiting membrane. The ducts of the several lobes ultimately unite and form a single main effluent. This runs up the under surface of the head in the middle line; enters the base of one of the stylets or lancets of the proboscis, namely, the central unimpaired one, called the tongue or epipharynx; traverses the whole length of it and opens at its extremity in such a manner that the secretion of the gland must be poured into the very bottom of the wound made by the piercing apparatus of the proboscis." Further, in the cells of these glands

were found large numbers of the elements set free by the rupture of the coccidia-like bodies in the stomach wall already described. These were found only in mosquitoes fed upon malarial blood. To make the experiment still more complete, such mosquitoes were allowed to feed upon uninfected sparrows. The result was most convincing, so far as proteosoma are concerned, that the mosquito carries infection by the act of biting. The infection of the sparrows by this means was if anything more virulent than that effected in other previously unknown ways. Several of them died, an unusual occurrence after infection.

Recent experiments with mosquitoes by Italian observers tend to show that the stages in the life of the human malarial parasite correspond to those of the proteosoma. Only certain varieties of mosquitoes seem capable of carrying the infection, and their presence in malarial districts and absence in healthy ones is so marked as to be a strong argument in favor of the inoculation theory. A most convincing experiment was that of allowing mosquitoes from a strongly malarious district access to the sleeping-room of a perfectly healthy young man. After two months remittent fever began, and estivo-autumnal parasites were found in his blood. It is believed that there was absolutely no means of infection other than the mosquitoes in this case.

From these and other results it can hardly be doubted that the inoculation of malaria by mosquitoes is an assured fact. Possibly more confirmatory evidence, or rather definite proof, of what seems to be established is needed. But this is forthcoming in every series of experiments, and the final conclusion cannot be doubted.

Koch is a believer in this method, as he says: "The more I study this disease, the more do I incline toward the opinion that infection by means of the mosquito is the main, probably the only, one. Wherever one goes he finds a relationship of both time and place between the presence of tropical malaria and the mosquito. On the coast there are several regions which have the reputation of being free from malaria, among which is the island Chole, which lies at the southern extremity of the large island Mafia. I have visited this island, which was formerly used by Zanzibar Arabs as a health resort. It is the only place on the coast where I was able to sleep without a mosquito net. In the mountains malaria comes to an end just where the mosquitoes disappear. As one passes inland, malaria and the mosquitoes disappear together. At those times of the year when there are many mosquitoes malaria is more severe."

The question now arises as to whether malaria is transmitted only by inoculation, or whether the organism gains ingress by other means. After the so-called germinal rods are discharged from the

coccidia-like bodies in the stomach walls of mosquitoes (and possibly other intermediate hosts), they are apt to find their way into drinking-water. Can man, then, be infected by drinking this water or by means of the air, or do the spores enter larval forms of mosquitoes, to be afterward transmitted by inoculation? Bignami reaches the following conclusion regarding this point: "So much is certain, viz., that inoculation is, up to the present, the only means for which experimental demonstration has been obtained. I believe it may be safely affirmed that all the facts known up to the present, regarding the biology of the parasites allied to those of malaria, favor the idea that infection is conveyed in only one way and introduced by only one method. To sum up, malaria is a disease which is contracted by inoculation—a fact of which we have now obtained the first experimental proof, since we have seen that an individual who has never had malarial fever, by sleeping in a healthy place where no one had ever previously taken fever, may sicken of malaria of a grave type if bitten by certain species of the mosquito brought in the adult state from some distant locality of highly malarious character. Further, everything points to the conclusion that inoculation is the only mode by which infection is acquired, since air and water as carriers of infection may be excluded, and because arguments based on analogy all tend in the same direction. This much at any rate we can assert, namely, that inoculation is the only mechanism of infection which has been demonstrated experimentally."

Many interesting questions concerning the matter remain to be settled, as, for instance, how the mosquito acquires the malarial parasite of man; whether one person with malaria may be a source of contagion to those around him, etc. Then comes the practical point of how to get rid of the mosquito. Great interest is being taken in the matter, not only by individual investigators, but by several of the most important governments of Europe. Further developments may soon be expected.

Beside the great interest being taken in the study of the origin of malaria, considerable attention is being devoted to the part played by other insects in the transmission of disease. Nuttall some time ago recorded his experiments with reference to the part taken by the house-fly in the transmission of the plague. He found that flies could live for several days after feeding on infected material, and that at the end of forty-eight hours they were still full of virulent plague-bacilli. Attention was called to the importance of destroying flies during an epidemic, and of preventing their alighting upon dead bodies or excreta, or upon food. Ants were also shown to have the power of spreading the plague infection. J. C. Wilson mentions the occurrence

of some twenty cases of cholera in New York at one time, they being caused by the infection of flies coming from a ship detained in quarantine. He considers them to have an important rôle in the spread of typhoid fever, and states that an advance soon to be made in some of the hospitals of Philadelphia is the careful screening of the typhoid wards.

W. M. L. Coplin, in a paper read before the Pennsylvania State Medical Society, May 17, 1899, gives the partial results of experiments being conducted at the Jefferson Medical College with a view of determining the degree and duration of the infectiveness of some of the common household insects. Roaches, bedbugs, and flies were brought in contact with infection, and after being kept in natural conditions as nearly as possible for varying lengths of time were allowed to walk across culture material. The bacillus typhosus was demonstrated by culture as present upon the insects for ninety-six hours after infection. Coplin's *résumé* is as follows: "(1) It is universally admitted that in malaria, Texas fever, the plague, and possibly other infections, both of animal and vegetable origin, certain insects may be most active in the dissemination of disease by their active introduction of the germ into the sound host. (2) In another class of cases, as well as in those typified by the foregoing, certain insects perpetuate or actually spread disease by acting as carriers, being the passive factors in the storage or transportation of certain infections of which typhoid and probably diphtheria may be taken as disease types, and flies, bedbugs, fleas, and roaches as the insects commonly at fault. The foregoing series of experiments go to show that for at least from twenty-four to forty-eight hours, and it may be much longer, after infection, bedbugs, roaches, and flies may be potent agents in the transportation of bacteria. (3) Any system of disinfection which does not destroy the material transported and render the carrier harmless is inefficient and unsatisfactory and therefore undesirable."

The preceding is based on Joly's division of the methods of propagation of disease by insects into two classes: first, passive, as when the insect simply carries bacteria from place to place; and secondly, active, where the insect actually makes a wound and thus conveys the contagion by inoculation. This practically includes the methods of propagation; but Craig (*Philadelphia Medical Journal*, June 24, 1899) suggests a more complete classification based on the lines followed by himself and others in experimenting upon the subject. According to this division insects may transmit disease in the following ways: (1) By transporting the cause upon their bodies and infecting whatever they alight upon; (2) by inoculating the disease-producing organism in biting or stinging; (3) by means of their excreta; (4) by serving as

an intermediate host for the development of the life cycle of certain disease producing organisms.

The importance of the rôle taken by insects in the spread of disease is thus recognized more and more as experiments are being reported. The great amount of literature on the subject evidences the interest taken by the profession in general. Experiments thus far have been more in the nature of proving the power of insects in this line, which of course must be the first step toward preventive medicine. So much has been done to make out a clear case against the offenders that we may soon hope for investigations as to the best means of destroying these carriers, which will be the practical result of these brilliant researches.

EPIDEMIC CEREBROSPINAL MENINGITIS.

BY GRANT G. SPEER, M D.,

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In my college days I was brought in contact with two cases of cerebrospinal meningitis in extreme condition of opisthotonos. No means employed appeared to relieve their distress, and as both died in terrible, though I am happy to say unconscious, agony, the effect upon my mind was a most distressing one, viz., that a patient stricken by this terrible disease was past all medical skill, and the sooner he was dead the sooner he would be out of misery. There has been no wide-spread epidemic of this disease since the sixties, and sporadic cases are not so common as to be met with at very frequent intervals; and some there are who may have received the impression that I have stated, and feel a certain degree of helplessness in the presence of a disease so virulent in its course, and so destructive in its effects, leaving in its path not only the graves of the dead but wrecks of the living.

To those who have had the opportunity to study the disease in a number of cases, the author extends a hearty apology for trespassing upon their time, as the object of this article is not to introduce any new method of treatment, but to call attention to this disease as it occurred in this locality, and to emphasize that, by the methods that have been employed in this and kindred diseases, it may be combated as successfully as many other of the grave zymotic diseases. This epidemic, the effects of which are still with us, has not included a large number of cases, but these have not been confined to any special age, class of people, or locality. At first the laity were very much frightened, and at one time a general panic was narrowly averted. This

state of the public mind was systematically brought about by several events following in close sequence. True, there were cases of cerebro-spinal meningitis in this city as early as August, 1898. One homeopathic physician claimed five cases during the summer, with no deaths. But the only case noted by the regular profession was Case 1 of this article. Little attention was paid to this by the general public, except in the immediate circle of those interested in the patient.

In the early part of the winter of 1898–99, this county, as well as the State in general, was visited by an epidemic of influenza. Closely following the disappearance of this came rumors that in villages to the north there had appeared a disease that presented many nervous symptoms affecting especially the head and spine, and which was unusually fatal; then came the newspaper report that forty cases of cerebro-spinal meningitis existed in one village, and that many deaths from the same disease had taken place in another. The public interest of this city was not sufficiently aroused to notice that a girl of twelve, feeling ill, was dismissed from school and died before the next morning, the onset being so rapid that a physician was not called until too late to render any assistance; and that a boy of seven, who lay for several days with what was supposed to be kidney disease, died at last with unmistakable head and spinal symptoms. Hence the people were all unprepared for the shock that followed almost immediately. A prominent and popular young lumberman, apparently in good health, was stricken down and died in about thirty-six hours after a terrible struggle that all the medical skill and care wealth could procure failed to relieve. Coincident with this case was that of a well known lake engineer about the same age, who in eighty-two hours passed away in much the same manner. The symptoms and course of the disease in these two cases were too classical to allow any doubt as to the nature of the malady. In accordance with the ruling of the State Board of Health, the local board issued a bulletin warning the people against unnecessary exposure and requesting conformity to rules that might be issued. As case followed case in no very rapid order, the public soon sank into its usual apathy. There was little done in the way of isolation except to enforce private funerals and to keep children from families where the disease existed out of the public schools.

The cause of this outbreak is not clear. Its gradually widening circle would indicate a contagious origin. But that the poison cannot be virulently active seems to be proven by the comparatively small number of cases where the great amount of exposure has taken place. Children have had free access to the rooms of their dying relatives, and there has been free intercourse between the families of relatives and neighbors. In only two families of the cases reported to the local

health officer has more than one case appeared in one family; and there have been two such instances brought to my notice outside of his jurisdiction. In the first of these, a half-crazy mother starved the children until one died, and the direct cause of his death was not revealed until the post-mortem, when unmistakable evidence of cerebrospinal meningitis was found. His little sister at that time showed the first symptoms of the attack, from which at this time, fifteen weeks later, she is slowly recovering. Of the circumstances of the other family in the city, and one outside, I have no personal knowledge, except there were two children attacked in each family, from which there resulted three deaths. The fourth family came under my notice in consultation. The eldest of two children died soon after being attacked, and almost simultaneously with her death the two younger children, one two and a half years and the other six months old, were stricken down and are still sick.

The old theory that this disease is related to the return of troops from camp appears to have a slight foundation. The first death of the company from this place occurred from this disease at a Detroit hospital, where the patient was removed from Island Lake. From the time the company left the city until ordered south, members, from various reasons, were constantly going and coming; and on the ending of hostilities we had our quota of men suffering from malaria and typhoid fevers. But the relation between cerebrospinal meningitis and the suffering of our soldiers enlisted for the war with Spain is too fine to receive serious consideration. That this disease does not depend upon either food or water is evident from the wide locality affected, with its various conditions, and the wide difference in the social position of those affected. It is more reasonable to ascribe this visitation to a list of predisposing causes, among which we may name the epidemic of influenza, with its attendance of colds and minor diseases, an unusually long and severe winter, the confinement of people in tightly closed houses, breathing a vitiated and superheated atmosphere, thus leaving the healthiest organisms in a comparatively debilitated condition, and when the infection arrived it found a highly cultivated medium in which to take root.

The symptoms of these cases, whether crowded into a few hours or extended through several weeks, in the main occur in sequence and form almost typical cases. There first appears a feeling of malaise, general discomfort, and uneasiness; shifting pains in arms, back, and legs, headache, especially at the base of the brain, and backache, follow each other in rapid succession. The pain becoming intense, almost unbearable, the neck stiffens, sometimes accompanied by small spasmodic contractions of the extensor muscles of the neck; there is

semiconsciousness, sometimes delirium, and unless the pain is soon relieved the head becomes overextended, the occiput resting in the concavity of the cervical region.

There may or may not be projectile vomiting, and spasms. I am led to believe that these have occurred in only a minority of cases. From the first there is a mild febrile movement which many times does not rise over 102 or 103, but in others rises to 105 or 106, accompanied by a pulse ranging from 90 to 120; but the pulse is not in ratio to the fever indicated. During the first few days the pulse runs proportionately low, and as the fever subsides in from four to ten days the pulse becomes slightly more accelerated, and continues its rapidity long after the temperature is normal. The respiration is rapid, and while regular, is quick and jerky, or it may be accompanied by a groan at each breath. The pain may be constant or intermittent, and is indicated in all ways, from a restless motion of a member in which it is located, to the sharp animal cries always spoken of in this disease, or even convulsions. The patient is extremely hyperesthetic, resisting any attempts at being touched or moved, and is very sensitive to light, jars, or noise; he becomes very peevish and fretful, taxing the patience of the attendants to the utmost. As the temperature falls, marking the decline of the acute stage, various paralytic phenomena take place. The pupils become, usually, widely dilated, but one may be dilated and the other contracted. Groups of muscles become useless without reference to any particular phase of the disease—it may be one arm and the opposite leg, the muscles of the throat or the bladder. There may be complete retention or incontinence of urine; or one condition may follow the other. Constipation is rather the rule than diarrhea. This paralysis may pass away in a few days, be transferred to other sets of muscles, or it may be persistent, causing atrophy of the muscles and a permanent impairment of the part.

It is perhaps too early to gather the amount of mental alienation arising from this epidemic, but as far as I can learn there has been none in those recovered. In Case 3 the patient was nearly a total imbecile during convalescence, but was much improved on his discharge, and has since fully recovered.

Preceding and contemporaneously with the typical cerebrospinal meningitis, there has been an epidemic of headaches, principally among adults, many of whom claim never before to have had a headache; and it is interesting from the fact that this headache resembles that ushering in the graver disease. It usually affects the back and top of the head, but may be accompanied by severe pains in the back. There is no rise of temperature, and at most the pulse is accelerated. This may last only a few hours or several days. And, too, spinal and

head symptoms occur in cases that at other times would not be expected. A colleague, with whom consultations were exchanged during the progress of Case 1, had a case of typhoid that during the early stages had so much pain and restlessness, not typhoid delirium, that at one time a change of diagnosis seemed probable; but aside from this variation the case ran a typical course of typhoid.

Some time during March I was called to see a Polish child two years old who on the previous day was said to have eaten fish, and was taken ill a few hours after. The child was very ill for six days, when it began to improve, and the physician was dismissed. This case presented no other symptoms than that of fever induced by indigestion, and the only pain complained of was in the bowels, which were bloated and tender. Yet for two days after getting out of bed the child carried the head to the right, and the left shoulder was higher than the other, and it was more irritable than before its illness.

To illustrate these general remarks I will give the notes of four of the six cases that came directly under my care.

Case 1.—R. K——, aged 3½ years, male. This patient was an active, sturdy little fellow, never sick, but rather nervous. During the first of the illness the mother observed certain indications by remarking about them, "He always does that," and even asserted that he had had pains in arms and legs nearly all summer. The lad was of rather a venturesome nature, and a few days before found to be ill he had fallen amongst the filth of an alley, and at the time of my first visit there was an ugly abrasion in the middle of the forehead, covered by a strong crust. August 14 he complained of not feeling well, was tired, and seemed disinclined to play. That night he was delirious. August 15 I saw him for the first time. There was a mild febrile movement and slight acceleration of pulse; other symptoms as day before; slightly nervous.

August 16. Slept well previous night; slight restlessness and mild pain.

August 17. Was delirious at night. There was jerking of arm in morning, but less in the afternoon. There was a retention of urine for twenty-four hours, relieved by catheterization. Evening temperature 101½°. The diagnosis at this stage lay between typhoid fever with nervous manifestations, tetanus from the abrasion on the forehead, and cerebrospinal meningitis.

August 18. Morning pulse 120, temperature 100½°; evening pulse 102, temperature 101, respiration 38. Conjunctiva diffused, head thrown back, and legs drawn up. Has pains which are referred to fingers, arms, shoulders, legs, and back of neck, shifting from place to place. Bowels inclined to be constipated, but moved three times

under the action of calomel. Kidneys acted voluntarily five times during twenty-four hours.

August 19. Did not rest well during night, awaking nearly every hour with a cry. The parents ascribed this to a blister 1 x 2 inches at the cervical region. During the forenoon he was nearly free from pain and slept nearly all the time. At noon lips blistered, tongue coated, sordes on teeth, knee reflexes absent. Temperature 99½°, pulse 118, respiration 24. At 4 P.M. temperature was normal, pulse 120. During the afternoon the contractions of the muscles amounted to a convulsion. (This was by far the most critical time in the whole course of the disease.) At 11.15 P.M. he was resting quietly; temperature 100°, pulse 100, respiration 20.

August 20. Rested well all night under the influence of sedatives, except for a time about midnight, when he had an attack of pain. These nightly attacks of pain or other manifestations of an exacerbation were marked features of this case, not observed in those following. During the morning he was somewhat restless from pain in the lower region of the back, the neck being apparently free from pain. He was perfectly conscious, and took plenty of nourishment in the way of milk. The pulse was somewhat weak and irregular, requiring stimulants. Was kept well under the influence of sedatives all day.

August 21. Acute symptoms much better after 8 P.M. the night before, and general improvement had taken place. Rested well; pupils tightly contracted, opisthotonos lessened, pulse weak, tongue clearing off. The pulse had improved in the morning. Restless and very irritable all day, demanding every few minutes to be changed from one bed to the other. By night the opisthotonos had nearly disappeared. The right arm was nearly useless, and the right leg drawn up. Temperature normal, pulse 100, respiration 36. (This apparent crisis occurred in nearly every case, but did not mark the end of the disease.)

August 22. Opisthotonos still present, but less in the legs. Right arm a little improved. Rested quietly. Temperature normal, pulse 100.

August 24. Arms and legs partly paralyzed. Has passed urine incontinently since catheterization on August 17. Is holding head straight, legs slightly drawn up, knees swollen on the inside. Complains of pains in the small of the back and legs, and during the evening there is restlessness. Right arm still helpless. Back and sides of body covered by a bright red, slightly raised, papular eruption. Appetite good; allowed eggs and toast.

August 25. Passed a restless night. Complained of knees and small of back. Head thrown back, legs drawn up. There were

clonic contractions of the sternocleido muscles. Right pupil contracted more than the left. (Signs of brain compression were observed in four out of six cases) Pulse slightly intermittent, heart sounds normal.

August 26. Temperature normal, pulse 85 and normal in character. Could raise arms with difficulty over head, which was a considerable improvement; legs also more useful.

August 27. Temperature normal, pulse 102. Incontinence of urine continues; legs still improving; pain in knees.

August 29. Improvement not so marked, appetite not so good. Was more restless, head drawn back, and pain reappearing in the right arm and leg. Bowels regular, urine the same.

August 30. Temperature 99.5°, pulse 104. Much improved over the day before. Rested quietly.

September 1. Pain in shoulders, left hip, and leg. Opisthotonos again a prominent symptom, the greatest curvature being over the sacrum Began the day before to indicate a wish to urinate.

As convalescence was established, the extreme helplessness of the patient became apparent. The arms could be raised above the head only with great difficulty; the legs could be moved a little, but the back was entirely helpless, making it impossible to raise the head long after the patient was practically free from any inflammatory or exudative processes. The arms recovered first, then the back, and more slowly the legs. He first began helping himself by pulling himself from side to side by his hands.

October 8. Previous to this the legs would not coordinate. The left leg was drawn back easily, but was raised and placed forward with great difficulty. The right leg would come forward with a jerk when he willed it to go ahead, but when he was told to bring it backward it would kick forward; and on attempting to walk the greatest confusion prevailed. These conditions are still present, but are so improved that by bearing his weight on two parallel objects he can walk backward and forward between them.

November 14. Pain in legs; a tendency to atrophy of muscles of legs noted.

February 18, 1899. There was a slight atrophy of the quadriceps of the right leg, and all the muscles of the left leg below the knee and of the foot, allowing the foot to droop and turn inward. The vitality of the left leg was low, the limb being cold and cyanotic, and at this date the foot showed a tendency to ulcerate whenever the shoe pressed even lightly.*

May 31. There was a little more motion of the atrophied muscles, but they had not increased in size, and there was a tendency of the

left leg to shorten. Otherwise he was in perfect health, mentally and physically, and aside from a limp he conducted himself as usual.

Case 2.—P. D——, female, aged eleven. Was dismissed from school on the afternoon of March 1 because of not feeling well. Complained of headache and stomach-ache. A physician was called March 2 and 3, who pronounced it a bilious attack. As the symptoms grew worse he was dismissed. The morning of March 4, at about 8.30, when I saw her for the first time, temperature was 99.1°, pulse 72; pupils dilated, eyeballs bulging, iris constantly in motion; face flushed and mottled. Back bowed at lumbar region; whole length of spine stiff and very sore, and the pain that could be produced in the neck by the motion made by taking hold of the end of the nose was intense. Patient was very restless; she complained of pain all over, especially in head and back. Every breath was accompanied by a groan. When asleep the eyes remained partly open. In the evening she remained in about the same condition, with the addition that the legs were partly drawn up. Temperature 100.5°, pulse 128.

March 4. Morning temperature 100°, pulse 120, respiration 26; evening temperature 101.9°, pulse 96, respiration 38. Rested well. In the morning not moaning, but resting quietly. A small amount of sedative was required but twice during the night. Herpes about the mouth. Back and head not sore; no opisthotonos. Sleeps with eyes open. Hands mottled. Bowels moved a little several times from cathartics; urine scanty.

March 6. Morning temperature 98.8°, pulse 120, respiration 22; evening temperature 100°, pulse 124. Rested well without sedatives. Is fairly comfortable, but says her back and calves of legs ache. No opisthotonos; back and neck stiff. Closes eyes better. Pupils still dilated; eyeballs do not protrude so much. At 7.20 P.M. respiration moaning; generally more sore and restless, but clear mentally.

March 7, 9.30 A.M., pulse 86, temperature 99.2°, respiration 24, full and regular. Pupils dilated, react slowly to light; face flushed and dark; mouth drawn down at corners; head drawn back; delirious in sleep. Is discharging at nose.

March 9. Temperature 102°, pulse 96. Perfectly comfortable; not a pain nor an ache. Nose still sore and discharging.

March 13. Temperature 99°, pulse 34. Bright and happy, good appetite, tongue coated, bowels regular. Has perfect use of all limbs; can rise to a sitting posture. Back is weak, so that she feels tired on sitting up, but there is no pain.

Strength gradually returned, so that within the week following she was about as usual.

Case 3.—C. L——, male, aged twenty, unmarried. On the after-

noon of March 7 he complained of not feeling well, and stopped work. On March 8 he was brought six miles in an open sleigh to the hospital, where he arrived in an unconscious condition. During the afternoon he aroused enough to talk in a rambling manner. Neck, back, and legs perfectly pliable. Probably had pain, but was too delirious to express it.

March 9. Head drawn back, neck stiff, very maniacal, requiring considerable force to control him.

March 10. Still maniacal. Vomited once with a projectile effect.

March 11. Began to succumb to sedatives. Head more and more drawn back, until it was overextended, the occiput resting exactly in the cervical curve. The back and legs were only slightly affected, but bearing such relation to the head that when the head was pushed forward they became more curved, and when the head became overextended they were more nearly straight.

After the patient was once under the influence of sedatives they were repeated at such frequent intervals that he was never free from their effects until convalescence was established. There was no time, even when the opisthotonos was most marked, when he could not and would not stand on his feet at every opportunity. As the opisthotonos gradually decreased he improved. A mild delirium alternated with partly lucid intervals until the last week of his stay in the hospital, when he lapsed into an imbecile condition, characterized by ptosis, a blank expression of countenance, and general confusion of all the mental faculties. There was danger of this mental impairment becoming permanent; but for the last two or three days of his stay he was a little brighter, begged to go home, and was discharged into the care of his family. Since then we have learned he fully recovered.

Case 4.—R. F——, male, 2½ years. This case ran nearly the same course as Case 1, with only such individual characteristics as occur in two patients, except this was complicated by pneumonia. The older text-books doubt the existence of the two diseases in the same individual, in which Rotch at least does not join. In this case there was pneumonia of first the left, then the right, lung, that appeared to run a course independent of the cerebrospinal meningitis. The child had never been ill, except an attack of croup about two weeks before this illness, from which he fully recovered in two days. He was taken ill March 11, had fever, threw hands over head, complained of feeling sore, and a swelling at the left elbow became a black spot on the day following.

March 12 I saw him for the first time. Temperature 103.6°, pulse 84, respiration 40. He had just awakened with a pain in his head, grabbed his hands into his hair with a cry, and vomited. From this

condition he lapsed into a stupor with eyes half-closed. Kidneys in good condition; bowels moved at noon.

March 13. Evening temperature 99.8°, pulse 94, respiration 45. Stuporous, eyes half-closed, awakening with a cry, and throwing hands over head. Back very hyperesthetic, and he objected to being moved. Was very thirsty.

March 14. Morning temperature 99.8°, pulse 114, respiration 46; evening temperature 102°, pulse 106, respiration 36; general condition same as day before.

March 15. Morning temperature 101.2°, pulse 130, respiration 38. Stuporous, eyes partly open, legs flexed, head partly thrown back. Portion of left lung solidified. He was very weak during the forenoon; face and hands mottled; respiration somewhat labored. At 2 P.M. there appeared to be a crisis imminent. Temperature 100.2°, pulse 130; the extremities became cold and the lips and the face cyanosed. Removed ice-cap, gave nitroglycerin $\frac{1}{100}$ grain hypodermically, and alcohol internally and externally. In two hours the temperature had risen to 102°, and the reaction had fully set in. At 7.20 P.M. temperature was 99°, pulse 92, respiration 30. At 9 15 P.M. temperature was 98.6°, pulse 88, respiration 30; sleeping quietly and naturally, the eyes closed, and the body covered with a warm perspiration.

During the next few days the general condition was much improved, to the extent one might expect from the healing of the left lung. The pulse and respiration were lower, and the temperature remained about normal. He ate better and played with his toys, sitting up in bed; but he remained very irritable, and many of the cerebrospinal symptoms did not leave him. A little before this there appeared on the inside of the left thigh a circumscribed vesicular eruption surrounded by an inflammatory zone; the vesicles coalesced to form a troublesome necrotic ulcer. During the night of March 22 he was more restless than usual, and on the afternoon following the temperature rose to 103°, which marked the invasion and subsequent solidification of the right lung. After a time the right side of the chest became swollen, and the solidification was persistent.

On April 5 Dr. John King was invited to examine the chest. There was a suppression of the respiratory murmur, a complete dulness on percussion, and an enlargement of one inch of the right side over the left. An exploration with an aspirating needle showed entire absence of pus. The chloroform used during this examination seemed to have a beneficial effect, and on that day and the one following there was a general improvement. Two days after this examination there was a still greater bulging of the right side, which induced me to

make still further explorations, using a larger needle than before, with wholly negative results.

During this period in which the lung was undergoing inflammatory processes the typical symptoms of cerebrospinal meningitis were taking place. There was a restlessness, irritability, pain, hyperesthesia, opisthotonos, delirium, loss of appetite with marked emaciation, dilatation of the pupils followed by dilatation of one pupil and contraction of the other, retention of urine, requiring catheterization, and partial paralysis of arms and legs. After the exploratory examination of the chest, the lung cleared up in a short time, without marked improvement in the nervous symptoms. The temperature fell to about normal, and the case assumed a somewhat chronic form. The condition of the patient became so low that death many times seemed imminent, followed by just enough improvement to give a gleam of hope, to be banished in the next few hours by a condition apparently more hopeless than before. On April 15, consciousness in a measure returned, and where he wept dry-eyed before, he now shed copious tears. From this time the improvement was slow, and with days when the condition was one for deep apprehension. By degrees the patient was able to sit alone, but it was not until May 21 that he was able to walk.

June 26. Was not walking as well as formerly. On getting tired leaned forward, and the gait was slightly spastic and measured. He fell down easily, but there was no appearance of spinal curvature nor atrophy of any of his muscles. He was not quite as heavy as before his illness, but had gained flesh steadily.

The number of cases reported to the local health officer for Manistee was thirty-four, and to these should be added the two cases mentioned as dying early in the epidemic, making a total of thirty-six, with sixteen deaths, or about $44\frac{7}{13}$ per cent. The remainder are reported "still sick" and "recovered." These do not include the cases that have occurred in suburbs of Manistee that are really a part of the town, but are not included in the city government. The prognosis is extremely difficult, since many cases which have had a mild beginning have died, when there were flattering prospects of recovering; and others, as in Case 3, began in a virulent form and made a complete and rapid recovery. There appeared more deaths to occur in the first few days of the acute stage than in those who could be kept alive until the exudative process, usually after the fourth day; and many cases that sank to such a degree as in other diseases would appear hopeless have recovered. It is well here to insist that no patient should be abandoned by his medical attendant until life has actually left the body.

In the treatment of cerebrospinal meningitis four principles may be arbitrarily laid down, viz.: relieve the pain; clean out, and keep clean, the alimentary tract; draw the blood away from the nerve centers, especially those areas included in the base of the brain and the medulla; and cause the absorption of the inflammatory products, as soon as they are found to be exerting pressure on the nerve centers. The nearer these rules are observed, by whatever means, the greater success shall we have in combating this disease. The most important by far of these rules is the first, since I firmly believe that more patients die from exhaustion induced by pain than from all other causes. When the case is first seen, morphine is usually the most convenient sedative, and in the absence of anything better, should be given in a quantity sufficient to produce the desired effect, as no time should be lost in making the patient comfortable. But the effects of any of the opiates cannot be maintained for the length of time required in this disease without injury to the patient; and since, in some cases, they produce cerebral excitement, and are not well borne by children, they have but a limited use. Chloral hydrate and potassium bromide relieve the pain as quickly and produce an anemic condition of the brain, and can be continued for a long time without doing harm to the patient, and with less liability of producing a habit. In all the cases treated by me the following became my sheet-anchor:

℞	Chloral hydrate	120 grains.
	Potassium bromide	120 grains.
	Cannabis indica	1 grain.
	Hyoscyamine	1 grain.
	Elixir q. s. ad	1 fluidounce.

M.

The directions given were to administer five to ten drops to a child two and one-half years old, and repeat every ten minutes until full effect was secured; and to be resumed as soon as restlessness again took place, thus insuring perfect quiet and ease on the part of the patient. The injunction to the attendants to not let the patient suffer was repeated frequently, and with great emphasis, lest the fear of "drugging" should prevent the order being carried out. Case 3 was a large, powerful fellow, inclined to be obstreperous, to whom thirty drops of this mixture was given every half-hour for three days, with no greater harm than to increase, or perhaps establish, the stupidity spoken of, and even with this the recovery was rapid and perfect. A practitioner of this city has used with equally as good success the acetanilid and phenacetine compounds, but with these I have had no experience. To clear out the bowels the best agent is, no doubt, calomel, which also acts as a means of assisting in causing the absorption of the products of inflammation. It has proved beneficial

in doses of $\frac{1}{10}$ grain given every ten minutes until bowels move, and repeated every day for the first few days, then every other day until the most violent symptoms have subsided. It is to be noticed that an exacerbation during any part of the disease may be abated by a dose of calomel. In cases where the constipation is persistent and there is danger of an accumulation of calomel, other means should be employed.

To draw the blood away from the nerve centers many ways have been adopted—active catharsis, bleeding, etc. But since the disease may last for weeks, and there is great prostration of all the vital forces, it would appear that anything to deplete the system must be avoided. The only means left us, then, to relieve the congestion of the central nervous system is to produce a congestion of other parts, preferably the skin. In the first manifestations of the disease great relief is obtained by a hot pack or an immense hot linseed poultice applied to the whole length of the spinal column. This may be replaced later by a mustard plaster applied not only to the back, from occiput to sacrum, but back of thighs, calves, and soles of feet. In most cases I have used the mustard alone from the beginning, and in the use of this the physician must be persistent, or the parents will neglect carrying this out to the full extent necessary, as they will ascribe all the pain of the disease to the mustard As soon as there is danger of blistering, the mustard should be removed, and the skin healed as rapidly as possible by the application of vaselin; then the mustard should be reapplied. It will be readily seen that this method is better than the blistering usually employed, in that it keeps the skin in an almost constant state of congestion, besides offering the required counter-irritation. In conjunction with the use of the hot pack or mustard I have used ice to the head, except in the last case treated, which was thrown into an attack of croup by the cold. The common ice-bag in these cases is worse than useless. The only one that fills the requirement is the ice helmet that envelops the head on a line drawn from occiput through ears to brow, and should not be removed from the time it is put on until convalescence has been established. When a helmet of this sort cannot, for any reason, be procured, one can easily be made to fully answer the purpose by folding the crushed ice in woolen cloths and covering the mass by bags of rubber cloth, made ample enough to fully envelop the head.

As the symptoms of pressure occur, usually early in the disease, the iodides are indicated. The most elegant preparation of these is the syrup of hydriodic acid, but in my hands this has failed to meet expectations; the saturated solution of potassium iodide has been found more reliable, and the amount a child will stand of this is quite

remarkable. In Case 4 there appeared no improvement under one drop doses every three hours, but when this was increased to four drops, or a little more than half a drachm daily, there was a marked change for the better. The gentleman previously quoted advocates large doses of protoiodide as fulfilling the indication of both mercurials and iodides. The fever in these cases is not usually an element of danger, but should not be overlooked. Quinine is strongly contraindicated because of its tendency to cause cerebral congestion, and where through force of habit it was administered, the patient became worse. Aconite alone, in small doses frequently repeated, or alternated with belladonna, gave very satisfactory results. Belladonna is highly recommended by those who have had experience in the epidemics of the sixties, but at this time it appears not to have been used extensively, except as an adjuvant to aconite to control fever. However, I believe it to be indicated and worthy of trial in full doses. Other aspects of this disease should be treated symptomatically. In a weakened condition of the heart strychnine and whiskey will fully meet the indications. Where there is total anorexia, rectal feeding may be resorted to; but some of the concentrated foods, given frequently by mouth in small quantities, have given better satisfaction. In Case 4, where it seemed as though the patient would die of starvation, and I was at my wits' end, a banana was given him as a last resort. This he ate, and others, without any ill effects. While I do not advise indiscriminate feeding in these cases, this one and another, which had previously been brought to my notice, were evidently benefited by the fruit which they seemed to crave. As soon as the hyperesthesia will allow, convalescence may be hastened by massage and inunction of oil, to which camphor may be added for the spine. Persistent paralysis and atrophies may be treated in the same manner in conjunction with electricity.

The small number of cases treated may not establish any infallible mode of treatment; but six cases, with only one death, and that in a slender girl, weakened by previous illness, and the throat muscles affected early in this sickness, would indicate a better percentage than is now laid down in the text-books. That this is not an isolated instance of success due to chance is apparent, since the gentleman whom I have twice quoted has also had a total of six cases with one death; and another gentleman who has treated ten of the eleven cases in one of the suburbs, reports two deaths, six recoveries, and two still sick. This is a remarkable record, considering that all his cases were in the homes of working men in only ordinary circumstances, and some of the cases assumed the true hemorrhagic type and were most virulent in character.

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EDITORIAL ARTICLES.

THE BURDEN OF MEMORY.

Berthelot, the eminent organic chemist of France, once made a calculation of the number of combinations which may be formed of acids with certain alcohols. In substance he said that if we were to give each compound thus possible a name, and then print one hundred lines on a page, and make volumes of one thousand pages, and place a million volumes in a library, we would want some thousands of libraries to complete our catalogue. The science of chemistry is perhaps the most striking example of the rapid accumulation of facts so characteristic of the present age. Hosts of investigators in every field of research are unearthing treasures of knowledge, and adding them to the accumulated scientific knowledge of the world. The burden which the memory is called upon to bear is already so heavy that it could scarcely be possible for any man, however gifted by nature, to carry with certainty those facts pertaining to any one department of science, even though his entire life were devoted to it.

This fact explains the increasing demand for works of reference. Encyclopedias, handbooks, compilations of tables, and other various and multiplied helps to memory abound; new books of like character are being constantly issued, and those which already exist need constant revision to keep pace with the march of discovery. It is quite evident that only a small fraction of this mass of facts can ever be stored up in any individual memory, for the attempt to remember them would occupy perhaps thrice the years allotted to the life of man. If only part can be remembered, it becomes important to know what ought to be selected for memory, and what must be left to books of reference.

But while facts are numberless, principles are, generally speaking,

comparatively few. We can, then, easily remember principles, and a knowledge of general principles is the key to research in books for facts we do not know. It is also the means whereby we can test the truth or falsity of statements contained in such works. It would be strange indeed if errors did not creep into any extended work of reference; nay, it is strange that so few errors are committed. If a fact is erroneously stated, however, the error will almost surely be discovered by considering it with reference to the principles which underlie it. We should therefore first seek to remember principles, and after them as many facts as we reasonably can. To every individual there is a choice in the facts which are to be remembered. Those which are of the most frequent application in his business or profession are the ones he will most likely choose to remember, and with good reason. The lifelong student (there are a few such still to be found) will choose such facts as he must frequently refer to in his studies.

Facts to be easily remembered require thorough and careful classification. To classify properly is a task of skill—skill only acquired by a proper appreciation of the true end of all classification, namely, convenient reference. A business man classifies his correspondence, and places each kind of document in its proper pigeonhole; but this classification might be carried so far as to utterly defeat the purpose it was designed to serve. The pigeonholes might be multiplied until a letter, note, or receipt could be picked out of a single bundle sooner than a particular pigeonhole could be found among the entire number. Of course this is supposing an extreme case, but it illustrates the point we wish to make, namely, that too much classification is as bad as too little. A great many people have too many pigeonholes in their memories; more have too few, however; and a few—those who seem largely gifted by nature in power of memory—seem to have neither too few nor too many. But no single individual has room in his memory for everything—all must have more or less recourse to their book-shelves.

Book-shelves are a poor recourse in many cases. Down comes a huge volume, the title of which in broad letters on its back shows that the fugitive fact we are after is or ought to be within its covers. We turn to the back part and find the index, but it is only a meager table of contents. We throw down the book in disappointment and chagrin, and feel that if we must hunt two hours or more for that fact we will conclude to do without it, unless the matter be of extreme importance. We may relieve our pent-up feelings by heaping anathemas upon the author and publisher, who, we imagine, thought to force us to read his entire work before we should have our fact. We look for another book, and find a copious and carefully compiled index, and by its help

we unearth our fact in less time than we occupied in searching through the table of contents in the former one. We dust this book carefully and place it close to hand, and put the other one away among the rubbish. As action is the soul of eloquence, so is an index the soul of a book of reference, and we admire large-souled men and large-souled books. Reference matter is a necessity of the age; and in fact all books on scientific or technical subjects are books of reference, and are more or less used as such, according to their worth. Authors should not lose sight of this fact. It is not enough that the subject should be ably handled; it should also be so arranged that any important passage may be found with the greatest facility. When this last and essential requisite is added to innate merit in other respects, it becomes a well-tempered, well-sharpened professional tool which, if mislaid or temporarily forgotten, may be regained with new refreshment of knowledge to the searcher.

EDITORIAL NOTES.

The Physiology of Reincarnation.

Swami Viva Kananda, the Hindu teacher and philosopher, who is so well known to many in America, has been using the Weismann theory of heredity in support of the Vedanta doctrine of reincarnation. He maintains that the notion of the continuity of the germ-plasm has come almost to the door of the doctrine of reincarnation. Weismann, in denying the inheritance of acquired characteristics, regards variations as a result of natural selection, the influence of which has reacted upon the germ-plasm. Vedanta teaches that the germ-plasm is a subtle reincarnating body containing potentially all the experiences, characters, and desires possessed by the individual in a previous form of life. It is not surprising that a physiology which has so many elements of the transcendental in it should approach closely to the tenets of a philosophy so largely metempirical.

Euphthalmine, the New Mydriatic.

Through a typographical error "euphthalmine" was spelled "enophthalmin" in the abstract appearing in The Medical Age of August 10. Schering & Glatz, 55 Maiden Lane, New York City, are its sole agents for the United States and Canada.

ITEMS AND NOTES.

An Italian medical society has been formed in New York.

The bubonic plague has appeared at Oporto, capital of Douro, Portugal.

The French hospital at St. Petersburg is now about practically completed.

Dr. A. C. Bernays, of St. Louis, has resigned his chair in the Marion Sims Medical College.

It is proposed in Germany to raise the age limit for criminal prosecution from the twelfth to the fourteenth year.

Professor Lazarus Fuchs, professor of mathematics in the University of Berlin, has been elected rector of the university.

San Francisco physicians have started a black list against wealthy patients who persistently refuse to pay what is asked of them.

There will shortly begin in Baltimore an investigation of the sweat shops with a view of preventing the spread of contagious diseases.

Naples is planning for an international antituberculosis congress and a national exposition of hygiene appliances at an early date next year.

The disinfection of all mails arriving from places suspected of being infected by the plague has been ordered by the Russian authorities.

The Notre Dame Hospital of Quebec has by the recent death of Mr. Z. Chapleau received $10,000, the Hotel Dieu $3864, and the Sisters of Providence $6304.

A German laryngologist says he can detect the sex of a person by looking down the throat, claiming that there is a marked difference in the vocal cords in the two sexes.

Professor Max Von Frey, the well known physiologist, is to take the place of Professor Fick, who has retired from actual medical life in the Würzburg Medical Faculty.

A company has been formed in New York City which will erect a crematory near Nyack, where the rapid consumption of dead bodies will be effected by means of liquid air.

The National (British) Association for the Prevention of Consumption suggests that another international congress for the study of tuberculosis be held in London in May, 1901.

O Brazil Medico of July 1, 1899, reproduces photographs of a pair of twins, bright, fairly-well developed girls of six years, who are connected together from the umbilicus to the level of the axilla.

Even the surgeons, says the *Philadelphia Medical Journal*, will soon have to envy the bacteriologist. Koch is said to have asked of the Cape Colony Government the modest fee of $250,000 for his work on the rinderpest.

Two internes at the Hospital Pelegrin recently fought a duel with pistols, the result of which was the perforation of the femoral artery and bladder in one, and the death of the other combatant, who was the son of a physician.

An American firm wants the land on which the San Francisco Women's Hospital at Havana, Cuba, is located, and has offered to build a new model hospital in another part of the town and pay $10,000 in cash in exchange for it.

A Montreal man has invented a pneumatic boot sole. When you lift your foot the sole fills with air, and when you put it down you squeeze out the air round your sock. This ventilating process keeps the feet dry and cool, it is claimed.

Dr. Vatchef, of Bulgaria, has received great assistance from the authorities of that country in presenting the studies of the Slavic type. The authorities have ordered exact measurements and physical details to be recorded according to his instructions of all the native soldiers in the army.

A circular has been issued by the physicians of Finisterre, the French province most ravaged by alcoholism, emphasizing its pernicious consequences to public and private health and national interests, and announcing that they can no longer remain impassive spectators of the catastrophe.

Doyen, the French surgeon, has exhibited to the students of Kiel University cinematograph pictures showing various surgical operations. He advocates the use of such pictures for the education of students, saying that they are far more effective than the most elaborate written descriptions.

According to Niebuhr, the first mention of the plague in history has been recently deciphered on a clay brick dating from 1380 B. C.

It is a message from the king of Alaschja to the Pharaoh Amenophis, apologizing for the smallness of his tribute a certain year, as all his officials had died "by Nergal's hand." Nergal was the pestilential god.

ACCORDING to the *Philadelphia Medical Journal*, a correspondence has taken place in one of the London papers concerning the name of the first lady doctor. The first lady doctor was (and is) Elizabeth Blackwell, an Englishwoman, born at Bristol. She studied at St. Bartholomew's Hospital just fifty years ago, and appears on the medical register for Great Britain forty years ago. Her earliest work, however, was done in America, where she made many friends at the time of the civil war.

ACCORDING to the *Medical Record*, a man from Norwich, N. Y., who after a tiff with his wife smeared carbolic acid upon his whiskers and feigned suicide, has repented. His employer administered mustard, and the doctors poured emetic after emetic down his throat against the joker's decided protestations, and finally the stomach-tube was resorted to. When the victim stopped his struggling, the doctors found time to look into the throat, and found that no poison had been taken. Moral: Don't sham suicide.

THE Alexandra Hospital for Hip-Disease, at Queen Square, Bloomsbury, London, which was established thirty-two years ago to provide ten beds for children suffering from hip-disease requiring prolonged treatment, has gradually increased its number of beds until it now contains sixty. The building was, however, unsuitable, and the friends of the hospital provided $100,000 to purchase the site and erect new buildings. The work has been completed, and on July 20 the Princess of Wales, after whom the hospital is named, declared the new buildings open. The hospital is free of debt.

ACCORDING to the *Journal of the American Medical Association*, the numerous severe and puzzling cases of intoxication in Italy, especially among the tourists in hotels and boarding-houses, have been attributed to the custom of preserving the carcases of the small birds which are killed in numbers for the feather trade, as they alight during their annual migrations. Those intended for the food market are supposed to be kept separate, but mistakes have evidently occurred, and the necessity of refraining from the toothsome "uccellini," as the cooked birds are called, should be impressed on all starting for Italy.

THE extent to which the opium habit prevails amongst Europeans in the East, says the *Journal of Tropical Medicine*, is only properly

appreciated by those specially brought into contact with the victims; they will be interested in the announcement made by Dr. Neil McLeod, of Shanghai, that it is possible to cure the habit by the administration of sodium bromide. He gives the drug "in two doses of two drachms, in solution, every two hours for the first two days, and one drachm on the third day," and adds that "three ounces of the drug in all will probably suffice in most cases." The treatment is quite safe and is well worth trying.

In a circular, says the *Scientific American*, the surgeon-general of the German army, Golar, in Berlin, calls the attention of the heads of the garrison hospitals to a new cleaning method, which is to be employed in future, as thorough experiments have proven it to be of advantage. By this method petroleum is added to the water besides soap and soda, taking as many grammes of it as there are liters of water used—*e.g.*, 30 grammes of petroleum to 30 liters of water. This admixture of petroleum not only admits of an easier cleaning, as well as less wear and tear on the linen, but the wash also retains its color, is thoroughly disinfected, and the expenses are considerably reduced by a saving in soap.

Mary Fogarty, of 238 West Sixteenth Street, New York, was admitted to the Bellevue Hospital on July 20, suffering from one of the rarest diseases known to the medical profession. She has acromegaly, or the swelling of portions of the body to gigantic proportions. The woman's head is twice the size of an ordinary man's head, her nose three times its normal size, and her hands twice the size of ordinary hands. The patient is over six feet tall, and she has a heavy beard and mustache, which, like her hair, is gray. The pathology of her case will, no doubt, be published in time. Meanwhile, her condition is serious, and the physicians believe she will die soon of exhaustion and general malaise.

According to the *Journal of the American Medical Association*, the entire sewage of Paris is used for irrigating and fertilizing the formerly barren tracts of land at Acheres and Pierrelay, where the cabbages, etc., now grow in rank profusion. The last great intercepting sewer emptying into the Seine was formally closed with appropriate ceremonies July 8, and the black flood diverted to the pumping works, where it is raised to a height of thirty-five meters and then distributed, the water finally draining clear and odorless into the river. In the addresses delivered a glowing tribute was paid to several physicians—Bourneville, Cornil, Proust, and others—who in the Senate Chamber and City Hall so materially forwarded the great work now brought to completion.

ACCORDING to the *Journal of the American Medical Association*, Fay Connor, eleven years old, died in Chicago recently, while under treatment by the Christian Scientists. Just before death took place a physician was called, who immediately recognized the disease to be diphtheria. The girl had been allowed to go out among her playmates and neighbors until too weak to leave her bed, and even then no efforts were made to isolate or prevent the spread of the disease. A coroner's jury investigated the case, and simply returned a verdict to the effect that death was the result of diphtheria. No one was censured or blamed in any way, because the laws of Illinois recognize these faddists as practitioners.

IT is well known, says *The Lancet*, that a curious collection could be made of medical "ex-votos" discovered by recent excavations at various temples of Æsculapius. Models have been found not only of external but sometimes of internal organs of the body. About a year ago Dr. Lanciani presented to one of the Roman museums a little marble base bearing an inscription in Greek which is a votive dedication in honor of Æsculapius of a very laudatory nature. It tells us that the donor's cause was that he had been cured of a tumor of the spleen by the god, and in recompense for the deity's succor he made an offering of an image of the diseased organ. Unfortunately, the little model, probably of gold, has disappeared, nothing remaining upon the marble but the mark of the place where it adhered to the base. In the memoirs of the German Archeological School at Athens Herr Zingerle has published an interesting memoir upon a temple of Æsculapius at Lebena, in Crete. It was known that the deity had a sanctuary at Gortyna near-by, but the Lebena one is new. Among the texts from it is one referring to a votary with a wounded finger, to whom the god appeared in a dream and indicated the requisite remedy, which was the application of oil of mallows (althæa) and massage. It is known to scholars that when Æsculapius worship was introduced into Athens about B. C. 420 by Telemachus of Acharnæ, Sophocles the poet was looked upon as the first and principal patron of the god's worship. The cause of this position of Sophocles was unknown, but is now ascertained. He was priest of an old hero deity or patriarchal quack named Amynos, and it was as holder of this office that he naturally fell into the position of preeminent votary of the new medical cult. A temple has been disinterred at Athens dedicated to Amynos, Æsculapius, and Sophocles, as Dexion, the inscriptions upon which clear up the matter.

NEW PUBLICATIONS.

DISEASES OF THE NERVOUS SYSTEM.

While justly proud of the recent text-books of American authors—Mills, Gray, Dana, Church-Peterson, and others—cordial welcome can be given to this latest volume, which brings a translation of the second edition of the work of this well known German neurologist. He who would be broad cannot be narrow as to the field from which he draws his inspiration, and to the translator and publisher are due credit for making more easily accessible this work by Ludwig Hirt.

The paper, print, and binding are those which have made the Appleton's Medical Library a comely, as it has been also a valuable, addition to any medical library. Though most of the illustrations are excellent, some few are not abreast of the art of the modern book-maker.

The general division of the subject is essentially that followed by Church in his recent excellent work, and to this division of the subject and its discussion the text is exclusively devoted. While some American text-books (most of them, in fact) have found room for valuable chapters on methods of examination, electrotherapeutics, and other correlative subjects, it is evidently the fixed purpose of this work to be a text-book on *diseases* of the nervous system, *and that only*, leaving methods of neurological examination, special therapy, etc., to those who may choose to write of them.

Tabes dorsalis and dementia paralytica are classed among the diseases of the general nervous system rather than among cord and brain diseases respectively, among which they are more commonly classed. Both are excellently and fully discussed. The bibliography quoted throughout the book is naturally most largely that of the German and French writers.

The book is of worth not only for the new and valuable material which it brings to us, but for the better opportunity to compare with our American text-books this latest work of this eminent German neurologist. C. W. H.

The Diseases of the Nervous System. A Text-book for Physicians and Students. By Dr. Ludwig Hirt, Professor at the University of Breslau. Translated with Permission of the Author by August Hoch, M.D., formerly Assistant Physician to the Johns Hopkins Hospital, now to the McLean Hospital, Waverly, Mass., Assisted by Frank R. Smith, A.M. (Cantab.), M.D., Instructor in Medicine in the Johns Hopkins University; with an Introduction by William Osler, M.D., F.R.C.P., F.R.S., Professor of Medicine in the Johns Hopkins University, etc. With One Hundred and Eighty-one Illustrations. New York: D. Appleton & Company, 1899.

EDINGER'S ANATOMY.

This is a translation from the fifth edition of the work of Prof. Ludwig Edinger. It is an admirable elucidation of the morphological and anatomical structure of the central nervous system of vertebrates. By comparing animals low down in the vertebrate series the attempt is made to determine where particular structures appear, how they vary, and what functions they may perform at different stages of their development. The author has been occupied ten years in studies in the realms of comparative neurology, and is therefore well qualified to discuss the subject of which he treats. It is needless to say that the work is a striking example of painstaking investigation and patient industry.

The Anatomy of the Central Nervous System of Man and of Vertebrates in General. By Prof. Ludwig Edinger, M.D., Frankfort-on-the-Main. Translated from the Fifth German Edition by Winfield S. Hall, Ph.D., M.D., Professor of Physiology in the Northwestern Medical School, Chicago, Assisted by Philo Leon Holland, M.D., Instructor in Clinical Neurology in the Northwestern University Medical School, Chicago, and Edward P. Carleton, B.S., Demonstrator of Histologic Neurology in the Northwestern University Medical School, Chicago. Illustrated with 258 Engravings; 6½ x 9½ inches. Pages xi–446. Extra cloth, $3.00. Philadelphia: The F. A. Davis Co.

HISTORY OF MEDICINE.

Dr. Roswell Park's work provides in a very convenient form a necessary but neglected element in the medical curriculum. There is little doubt that in every medical school lectures should be given upon the history of medicine, for in order to appreciate the position occupied by any science some knowledge should be had of its past history. The knowledge of medicine as an art is inseparable from the knowledge of the theories and beliefs which have modified the science of medicine in the past. The work of Dr. Park reviews the history of medicine from the earliest days, the final chapters dealing with the history of anesthesia and the history of antisepsis. To this edition of the work have also been added a chapter dealing with the history of dentistry and one dealing with iatrotheurgic symbolism. It is to be hoped that the perusal of this excellent work will stimulate the faculties of medical colleges to establish chairs of medical history and medical biography. Until this is done the profession of medicine will continue to be tinctured with a spirit of empiricism. Nothing can be more elevating than the subtle influences which come from a consciousness of a fine history in the past.

An Epitome of the History of Medicine. By Roswell Park, A.M., M.D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a Course of Lectures Delivered in the University of Buffalo. Second Edition. Illustrated with Portraits and Other Engravings; 6½ x 9½ inches. Pages xiv–370. Extra cloth, $2.00 net. Philadelphia: The F. A. Davis Co.

SURGICAL SHOCK.

The important subject of surgical shock has hitherto received but scant attention from those engaged in experimental research. The present volume records a somewhat elaborate series of experiments undertaken with a view of settling certain disputed points in physiology. The author has been enabled to furnish certain graphic data as the result of the infliction of surgical shock by operations on 148 animals. The work was accorded the Cartwright prize of 1897. The conclusions arrived at have practical bearing upon surgery, and the author has done a genuine service to science in presenting the results of his experiments in a form which makes them generally accessible.

An Experimental Research into Surgical Shock. An Essay Awarded the Cartwright Prize for 1897. By George W. Crile, A.M., M.D., Ph.D., etc. Philadelphia: J. B. Lippincott Company.

WOOD'S HAND ATLASES.

It would be impossible to imagine a higher example of the atlas manual than is this work of Professor Helferich. The superb quality of the colored plates and the admirable graphic delineation of the injuries depicted combine to make this work indispensable to the surgeon. The letter-press comprises a general consideration of the subject of fractures, and this is followed by case-records and illustrations typical of the various forms of fracture. This work will be extremely popular with students and practitioners alike.

Atlas on Fractures and Dislocations. By Prof. Dr. H. Helferich, of Greifswald. Translated from the Third German Edition by J. Hutchinson, Jr., F.R.C.S. Sixty-eight Superb Chromolithographic Plates, with Descriptions, and 130 Pages of Treatise. Illustrated by 126 Woodcuts. Wood's Series of Medical Hand Atlases. Muslin, $3.00 net. New York: Wm. Wood & Co.

SIGNS AND TESTS OF DEATH.

Dr. Herold, in this little brochure, gives a careful enumeration of the signs and tests of death. He regards putrefaction as the most certain sign of death, and the opening of the radial artery as the surest method of avoiding the possibility of error.

Signs and Tests of Death. By Justin Herold, A.M., M.D., New York. *Medical and Surgical Journal*, New Orleans.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Hernia Following Abdominal Operations: Its Prevention and Cure.

A. Lapthorn Smith (*Medical Press and Circular*, Aug. 2, 1899) sums up his paper as follows:

1. Hernia is a frequent complication following abdominal section.

2. When it occurs it prevents other women from undergoing laparotomy.

3. It is quite preventable: (*a*) By leaving in the stitches for one month if the woman is thin enough to allow us to use through-and-through sutures; or (*b*) by using non-absorbable buried ligatures when the woman is fat enough to require two layers of sutures. The writer prepares his silkworm-gut by placing it in sealed glass tubes and boiling it. A cut with a file is made in the middle, and just when it is required for use the tube is snapped across. (*c*) By discarding the abdominal drainage-tube, and when drainage is necessary, which it rarely is, draining through the vagina. (*d*) By securing accurate coaptation of the cut edges by marking the places where the stitches are to go before the incision is made. (*e*) By taking care that no peritoneum is curved up so as to come between the muscle and fascia of opposite sides.

4. Hernia is easily cured in small cases with a single buried silkworm-gut, purse-string suture, and in larger cases by splitting the edges of the ring until the recti muscles are exposed from top to bottom, and suturing them with buried silkworm-gut.

5. Patients with buried silkworm-gut stitches do not need to stay in bed more than two weeks, and in some cases less; and they do not need to wear an abdominal belt.

6. Patients with through-and-through silkworm-gut stitches left in for a month can, in case of necessity, go home in twelve or fifteen days, and return at the end of four weeks to have their stitches removed. They do not need to wear a support until the stitches are removed, and even then it is not necessary.

Two Cases of Ruptured Liver.

Recently at the Berlin Medical Congress (*Medical Press and Circular*, Aug. 9, 1899) Dr. Hahn showed two cases of ruptured liver. The first, a young man, aged seventeen, fell while cycling, lost con-

sciousness, and on recovery felt acute pain in the abdomen. There was great paleness and dulness over the depending part of the abdomen. Laparotomy was performed at once; in the abdomen two liters of blood was found. On the convexity of the liver a rent eight centimeters in length was felt, but at first not seen. Only on separating the suspension ligament could the liver be turned out so far that the rent could be closed with fine catgut sutures. The abdomen was then closed, and recovery was uninterrupted.

The second case was one of gunshot wound. The point of entrance was between the middle line and the right margin of the ribs. The ball lay just behind and above the crest of the ilium; it could be easily felt, and was removed without difficulty. Laparotomy was then performed. Entrance and exit openings were found in the liver, mesentery, pancreas, and parietal peritoneum. Pledgets of iodoform gauze were packed into each of the openings, the ends being left outside. Recovery uninterrupted.

In all cases of rupture of the liver the speaker advised operation as quickly as possible, in order to master the great danger—the hemorrhage—and this was best accomplished by suture through the whole substance of the liver.

Hr. Israel remembered a case caused by a table-knife. The knife entered in the tenth intercostal space. The tenth and eleventh ribs were resected; the pleural cavity was full of blood, the diaphragm being perforated. The abdomen was then opened, and the wound in the liver sutured. Recovery took place.

Surgical Treatment of Acute Peritonitis.

A. F. House, in the *Journal of the American Medical Association* of August 5, 1899, says that the symptoms of acute peritonitis, when operative interference is advisable and not without hope, may be grouped as follows: (1) Pain of varying degree, either local and becoming general, or general becoming local, according to cause; (2) tenderness, as a result of pain, marked rigidity of the abdominal muscles; (3) vomiting, usually of a green, ropy substance; (4) shock, varying in degree; (5) distention of the abdomen. The symptoms in fully developed peritonitis, in which the wisdom of an operation is questionable, are pain, lessened or absent; general tenderness; marked distention replacing the rigidity; incessant vomiting; obstinate constipation; rapid, feeble pulse; cold extremities; and mind clear. In the early stages of acute peritonitis an exploratory incision is justified, but not imperatively demanded. Every case should be subjected to an operation at once, or as soon as the patient has been prepared,

excepting in cases of gonorrheal infection of the tube, in which operation may be delayed until the acute symptoms subside. The method advocated is the irrigation of the peritoneal cavity with from two to four gallons of normal saline solution. No drainage is employed in non-suppurative cases.

The Esophagus: Cicatricial Stricture Thereof and its Treatment.

W. J. Mill (*Journal of the American Medical Association*, July 29, 1899) sums up a very interesting article with the following conclusions:

1. Systematic sounding should be commenced in from two to four weeks after the swallowing of a caustic substance.

2. Should the traumatism be severe, immediate gastrostomy will lessen inflection and hasten cicatrization, sounding being carried on as before.

3. Non-dilatable strictures in the vicinity of the cricoid cartilage should be divided by external esophagotomy.

4. Strictures above the arch of the aorta may be safely cut by a combined internal and external esophagotomy.

5. Dense thoracic strictures are best dilated by Ochsner's method, and, if necessary, divided by Abbe's string saw.

6. Impassable strictures should be treated by retrograde dilatation.

7. A dilated stricture should be occasionally sounded for years if not for life.

MEDICINE.

The Etiology of Yellow Fever.

The conclusions from the report of Surgeons Wasdin and Geddings, of the U. S. Marine Hospital Service, on the nature and etiology of yellow fever are as follows:

1. The microorganism discovered by Prof. Giuseppe Sanarelli, of the University of Bologna, Italy, and by him named "bacillus icteroides," is the cause of yellow fever.

2. Yellow fever is naturally infectious to certain animals, the degree varying with the species; in some rodents local infection is very quickly followed by blood infection; and while in dogs and rabbits there is no evidence of this subsequent invasion of the blood, monkeys react to the infection the same as man.

3. Infection takes place by way of the respiratory tract, the pri-

mary colonization in this tract giving rise to the earlier manifestations of the disease.

4. In many cases of the disease, probably a majority, the primary infection, or colonization in the lungs, is followed by a "secondary infection," or a secondary colonization of this organism in the blood of the patient. This secondary infection may be complicated by the coinstantaneous passage of other organisms into the blood, or this complication may arise during the last hours of life.

5. There is no evidence to support the theory advanced by Professor Sanarelli that this disease is primarily a septicemia, inasmuch as cases do occur in which the bacillus icteroides cannot be found in the blood, or organs in which it might be deposited therefrom.

6. There exists no causal relationship between the bacillus "X" of Sternberg and this highly infectious disease, and the bacillus "X" is frequently found in the intestinal content of normal animals and of man, as well as in the urine and the bronchial secretion.

7. So far as the Commission is aware, the bacillus icteroides has never been found in any body other than one infected with yellow fever; and whatever may be the cultural similarities between this and other microorganisms, it is characterized by a specificity which is distinctive.

8. The bacillus icteroides is very susceptible to the influences injurious to bacterial life, and its ready control by the processes of disinfection, chemical and mechanical, is assured.

9. The bacillus icteroides produces *in vitro*, as well as *in vita*, a toxin of the most marked potency, and from our present knowledge there exists a reasonable possibility of the ultimate production of an antiserum more potent than that of Professor Sanarelli.

The Non-retarding Action of Combined Hydrochloric Acid on Starch Digestion.

A. E. Austin (*Boston Medical and Surgical Journal*, vol. cxl, No. 26), who has made a great number of experiments, is led to the following conclusions:

1. When a non-albuminous test-meal is given, free hydrochloric acid makes its appearance at the end of twenty minutes after eating, and at the end of half an hour the amount of free hydrochloric acid equals that of one or two hours after eating where albuminous foods are taken.

2. Under normal conditions the ptyalin of saliva digests most of the starchy constituents of food in the stomach within one or two hours, which takes place before free hydrochloric acid accumulates

in the stomach to such an extent as to interfere temporarily with the diastatic action of the saliva on starchy food. Those portions of starchy food which remain comparatively undissolved, and pass over to that portion of the digestive canal where they are acted upon by the pancreatic diastase, constitute a very small portion of the starchy food taken.

3. The administration of isolated diastase considerably enhances the digestion of starchy food in the stomach, even under normal conditions.

4. The elimination of the supply of the ptyalin of saliva to the stomach will cause marked retardation of starchy digestion in the stomach.

5. A maldigestion of starchy food, due to the deficiency of the diastatic power of saliva, can be regulated by the administration of isolated diastase.

6. The impression held by many that the diastase of saliva becomes non-active fifteen or twenty minutes after eating is totally erroneous.

A Type of Tropical Fever.

L. L. Von Wedekind, in the *Medical Record* of August 19, 1899, says there is a type of fever which is very common in the Philippines, and which is known as calentura. It is of frequent occurrence and will, without care on the part of the new arrival, attack him in a very short time. There are very few, if any, prodromal symptoms. The onset is sudden; it may or may not be preceded by a slight sensation of chilliness; then a temperature of from 102° to 103° F. is noted. This continues, gradually increasing, until 104° or 105° F. is reached. There are general myalgic pains, cephalalgia, anorexia, and a very marked asthenia associated with gastric disturbance. With no treatment the case will convalesce within seven days. Quinine has no effect—that is, no specific effect. Large doses will, of course, reduce the temperature, but a low fever will continue for a number of days before it breaks. The cold bath reduces the temperature markedly but temporarily.

With regard to treatment, the patient is given frequent doses of calomel until two or three grains has been taken. This is followed in the evening by a brisk saline purge. After the calomel he gets four drops of tincture of aconite every two hours for three, four, or possibly five doses, the amount depending upon the evidence of the drug's action. Within five hours, as a rule, the bowels are thoroughly cleared, the intense headache is relieved, and gentle perspiration is going on. The next day, in the great majority of cases, the tempera-

ture is normal and so remains. Some of the cases are a little obstinate, the temperature not remaining at normal, but running up as high as 101° F., and then falling to normal about forty-eight hours afterwards, although the uncomfortableness is relieved by the aconite as by no other remedy.

The Pathology and Etiology of Rheumatism.

C. R Marshall, in the *New York Medical Journal* of August 12, 1899, says that the pathology and etiology of rheumatism are still not clear. The existence of lactic acid in the economy is a predisposing cause of the disease, but there is no conclusive evidence that it is the exciting cause. Reduction in the alkalinity of the blood is a prominent feature of the disease; this may follow the suppression of perspiration, the ingestion of food containing a high percentage of acid, or the absorption of products of acid fermentation in the gastro-intestinal tract. Nutrition is inhibited by diminished oxidation; reduced alkalinity of the plasma means diminished oxidation and consequently retarded nutrition. Defective oxidation is most generally observed in warm and damp climates; the clear, cold, and dry air of winter acts as a stimulant to those processes, which are then so much accelerated that many of the phenomena characteristic of rheumatism are checked or fail to appear. The prompt and systematic administration of alkaline salicylates is the only safe plan to adopt in the treatment of the acute type of articular rheumatism. Salicylic acid is freely absorbed by the skin and may be applied in the form of an ointment; the physiologic effects of the salicylates are manifest in a short time, but no gastric complications occur. The application is covered with impermeable material.

Infusion of Salt Solution Combined with a Special Method for the Administration of Oxygen Inhalations as a Treatment in Pneumonia.

Penrose (*Johns Hopkins Hospital Bulletin*, July, 1899) in the treatment of pneumonia has used infusions of the physiologic salt solution, followed by inhalations of oxygen, with apparently good results. This treatment was prompted by the effect of infusion of the salt solutions upon the respiration noticed in surgical operations. He maintains that the toxins in the blood are then diluted, delirium relieved, the elimination through the sweat glands and kidneys promoted. It lowers the temperature and the rate of respiration, stimulates the heart, and apparently renders the patient more susceptible to the influence of oxygen. Special attention must be paid to the second

pulmonic sound during the process of infusion. Should it become so greatly accentuated as to assume the character of a murmur, infusion is at once stopped and bleeding resorted to. Penrose prefers the use of a funnel in the administration of oxygen and suggests passing the oxygen through a hot inhalation mixture. This method the author has used both in his private practice and in the Johns Hopkins Hospital with comparatively good results.

Poison in Our Food.

The Nation of May 25, 1899, says: "In Pennsylvania the food and dairy commissioner, Levi Wells, has ascertained that chemical companies have had agents traveling regularly in the State to sell to butchers chemicals for preserving meats, the favorite being apparently boracic acid, which 'is certainly deleterious to health.' The packages are labeled, telling how the chemicals are to be used on meat. In Connecticut the Agricultural Experiment Station issued on May 1 its annual report on the adulteration of foods. It gives a summary of the extent to which frauds are practiced on consumers, thanks to Yankee ingenuity, combined with modern advances in chemistry. Of sixty-three samples of fruit jellies, two-thirds were adulterated, not only with starch and glucose, but with anilin dye and poisonous salicylic acid. Out of forty samples of marmalades and jams only three were pure. Of forty-seven samples of beer and ale, twelve contained salicylic acid; and nineteen samples of sausages and oysters were found 'embalmed' by boric acid."

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Some Facts and Theories Relating to Autointoxication.

Chittenden (Proceedings of the Pathological Society of Philadelphia, June 1; *International Medical Magazine*, August, 1899) discusses, in a very able paper, the present status of our knowledge regarding the metabolic factors of autointoxication. He quotes experiments of many observers tending to establish the toxicity of many of the products of metabolism so far isolated from the urine. Adenin seems to be the only one of the nuclein bases possessing high toxic properties. In dogs, toxic symptoms, and even death, were produced by the administration of the latter substance. Hypoxanthin, on the other hand, does not produce any marked physiologic effect, either in dogs or man, being readily converted into allantoin and uric

acid. All the other substances of the alloxuric group possess either negative or feeble toxic properties. Intestinal putrefaction gives rise to a large number of toxic substances, such as phenol, cresol, indol, skatol, fatty acids, gases like methyl mercaptan, hydrogen sulphide, and methane, together with the diamins, such as putrescin and cadaverin. Many or all of these are responsible for many cases of autointoxication. The toxicity of indol has been established by the recent experiments of Herter, who found that the characteristic symptoms of indol poisoning in both dogs and rabbits are cardiac and respiratory depression, general prostration, marked contraction of the pupils, irregular clonic spasms, and increased reflex excitability. When the quantity of indol injected is large, death results from cardiac failure. In chronic indol poisoning brought about by subcutaneous injections of small quantities, profound disturbances of nutrition are produced which may end in death in the course of a few weeks. On post-mortem examination histologic changes are found in the liver, which is congested and undergoing degeneration. In man very large doses were required to produce any toxic effect. In conclusion, the author expresses the opinion that none of these toxic substances are directly responsible for the symptoms of autointoxication, but their presence in the circulating blood may induce changes which produce a disturbance of nutrition of the nerve cells, and thus indirectly bring about the results observed.

Four Cases of Monstrosity in the Same Family.

Hestle (*Virginia Medical Semi-Monthly*, June 23, 1899) narrates the extraordinary history of a mulatto woman, well formed and healthy, as was also her husband, who gave birth to four male infants (the results of the first, fourth, fifth, and sixth pregnancies), in all of whom the hands and feet were attached immediately to the body (phocomelus?), and all wanting the external ear. Her female infants were normal, and are still alive. There was a maternal impression (fright from an opossum) in each of the pregnancies, which ended in the birth of a monstrosity.

Detection of Tubercle Bacilli in Stools.

Rossenblatt, of Odessa, in the *Centralblatt f. Innere Medicin*, No. 29, 1899, says that tubercle bacilli can easily be found in the feces if the patient is given tincture of opium until the stools are hard and formed. Then an examination of the surface or of the mucopurulent spots will probably reveal the bacilli in the first preparation. The hard scybala in passing the ulcerations carry the bacilli along, while in loose stools the bacilli are lost in the great mass.

THERAPEUTICS.

Extract of the Corpora Lutea.

At the meeting of the Paris Society of Biology, held on June 24, Monsieur A. Lebreton (*Lancet*, July 15, 1899) laid before the Society the results of his researches into treatment by means of extract of the corpus luteum. In an inaugural thesis M. Lebreton had already pointed out that by their histological structure it was evident that the corpora lutea were really ductless glands, and that the benefits of treatment by ovarian extract depended mainly upon the principles contained in corpora lutea. As a means of experimental verification of his theory he had some capsules made, each containing 0.05 of a centigramme of pure corpus luteum. These he administered to three patients suffering from the following symptoms: flushes of heat, buzzing in the ears, sweats, feelings of "sinking" sometimes going on very nearly to fainting, nightmares, breathlessness, palpitations, and digestive troubles—in a word, all the symptoms due to "ovarian insufficiency." Two capsules per diem were given before the principal meals of the day. The drug acted promptly with notable success, and there were no ill effects noticed. M. Lebreton is now pursuing his researches into the therapeutics of the corpus luteum as regards the various troubles of pregnancy—notably vomiting. He has already met with two cases in which the results were conclusive, but reserves publication until he has a larger number of cases upon which to report.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Treatment of Deflections of the Septum.

In an editorial article on this subject by Dundas Grant in the August number of the *Journal of Laryngology*, the writer states that on account of the great variety of shape and contour in these deformities a universal method of treatment is scarcely attainable, but the nearest approach to this is undoubtedly the simple sawing operation advocated with such force by Bosworth. He suggests the importance of having in mind the danger and possibility of a perforation, and states that while the exceptional cases in which such an accident occurs inculcate very obvious precautions, they do not invalidate the conclusion that Bosworth's sawing operation is by far the most generally applicable in cases of deformity of the septum in the gross.

For crests and spurs on the bony septum Bosworth's saw or some

modification of it is the ideal instrument, though some prefer a ring knife, chisel, or trephine.

Grant discusses at some length the recent symposium on "Treatment of Nasal Stenosis Due to Deflective Septa, with or without Thickening of the Convex Side," which was afforded the Laryngological Section of the New York Academy of Medicine in the papers recently read by Drs. Bosworth, Asch, Roe, Watson, Gleason, and Douglass, and continued in the general discussion by Drs. Wright, Newcomb, Curtis, Root, Mayer, and Harris. These papers were fully reported in the *Laryngoscope* for June, 1899. The writer suggests in conclusion that, before undertaking any operation, the surgeon should carefully consider by what means he can restore the necessary air-passage with the least amount of traumatism, and on principle remove the structures of least physiological importance. He considers that the production of a perforation is not on the whole a matter of indifference, and should always where possible be avoided.

His concluding paragraph may be taken as somewhat of a compliment to American workers along this line, for he says: "The treatment of pure deflection of the cartilaginous septum seems to have excited less interest in this country than in America, if we may judge by our current literature and the reports of our societies. In the light of the facts and opinions so powerfully focalized in the discussion to which we have so freely alluded, it is most desirable that such operations as that of Asch and its congeners should receive more critical attention than hitherto from British rhinologists, both conservative and progressive."

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

A Case of Poisoning from the Use of Eserine in the Eyes.

Dr. C. R. Dufour (*Archives of Ophthalmology*, No. 4, 1899) reports the unique case of a married woman, aged thirty-five years, who suffered from eserine poisoning after the use of eye-drops. The patient consulted the Doctor complaining of headaches, temporal and occipital, and he prescribed a two-per-cent solution of hydrobromate of homatropine, two drops of which was to be dropped into the eyes every fifteen minutes for two hours, at the end of which time she was to come to his office to be refracted.

The prescription was obtained from their druggist, a graduate of pharmacy; and upon the first instillation into the eyes a most violent

pain occurred in the eyes and head. She continued the use of the eye-drops, supposing they were right, but the pain increased, and she became weak. She then attempted to go to the Doctor's office, but when she reached within three blocks of the place she became so weak and prostrated that she fell on the sidewalk, almost on the verge of collapse, and had to be carried into a neighboring house. The Doctor was called and found her with a weak and slow pulse, respiration difficult, intense pain in eyes and head, reflexes almost abolished, pupils contracted *ad maximum*, being no larger than a pin-point. He gave her a dose of atropine, digitalis, and nitroglycerin, and repeated it at proper intervals until she was better and was able to give him the history of the case. He suspected eserine poisoning from the condition of her pupils, and from the color of the drops left in the vial; they were of a pink color. The druggist admitted his mistake; he had given her a two-per-cent solution of sulphate of eserine, of which she had put two drops into the eyes eight times. She had fully recovered from the effects of the poison in a few days, and was able to go on with the ocular examination.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Degrees of Toxicity of Microorganisms.

In his presidential address before the late meeting of the American Dermatological Association Prof. John A. Fordyce said: "The experiments of the pathological chemist have shown that the same organism may produce two or more substances of varying degrees of toxicity; the products of the bacillus of tuberculosis in the skin, for example, may differ from those produced by the organism in the lungs, bone, or lymph nodes, and this difference may explain the variations in the clinical course of lupus vulgaris as it affects the skin and mucous membranes, and the true tuberculous ulcer of the mucous membranes and adjacent skin. The same organism previously inoculated in the skin, producing its peculiar toxin, gives rise to a definite clinical picture, while the inoculation resulting from the bacilli grown in the lungs, with its different or more virulent toxin, results in a condition which is quite unlike the slowly progressing lupus. Pyogenic organisms, too, present great variations in their virulence, according to their source and to other conditions not well understood; and thus the lesions produced by them are not always of uniform appearance nor identified in their clinical course."

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ORIGINAL CONTRIBUTIONS.

THE ART OF DIAGNOSIS.

BY A. L. BENEDICT, A.M., M.D.,

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The prime factor in successful diagnosis is to free the mind from the too prevalent notion that symptoms are like the more or less obscure letters of a blurred manuscript, and that diagnostic acumen consists in deciphering enough of the letters to enable one to guess with greater or less positiveness at the remainder. To a certain extent this method of diagnosing, or rather of identifying, diseases is successful. For instance, with the observations (1) that a patient is a child, (2) that he is dull and sleepy and has been so for several days, (3) that he has a general catarrh affecting the eyes, throat, trachea, and lungs, (4) that he has fever, (5) that there is a pretty generally distributed reddish eruption occurring in irregular crescents and lenticular forms, (6) that this rash dates from the third day of the disease, we can very readily spell out the word "measles." But we cannot treat the entity measles thus established, and our process has been as much a matter of rote and has left us as ignorant of the true nature of measles as the identification of a flowering plant by an ordinary botanic table leaves the student far from any genuine botanic knowledge. In either case superficial methods of observation have been employed, the brain has been taxed only to the extent of drawing on the memory, and the goal has been a name. The average botanist, studying without the least thought of originality and with absolutely nothing depending on his work, has nothing but his own satisfaction to seek. The physician, on the other hand, is involved in a grave responsibility, not to determine by what name he shall call a disease, but to know what that disease is.

Sometimes the spelling-book method of diagnosis is extremely easy, dealing with words of only two letters, like u-p, up. For instance, a young woman presents herself complaining of nausea and vomiting, particularly in the early part of the day, and some leading questions elicit the history of suppressed menstruation. From these two factors, with great probability, the "diagnosis" is promptly made of vomiting of pregnancy. The diagnosis is a little more elegant if the expression hyperemesis gravidarum is used, and this term seems to be especially gratifying if the first word is accented on the next to the last syllable (I beg pardon, penult), and if neither word has lost its novelty through too long acquaintance with the language whence it sprang. But while the identification-diagnosis in the case of measles at least led to the recognition of a definite disease, vomiting of pregnancy is neither a disease nor even a constant symptom. Pregnant women may vomit or they may not; if they do, it may be on account of a reflex irritation from the expanding uterus, or it may be on account of some well-marked digestive disturbance, functional or organic, requiring even more definite diagnosis and treatment in the case of one who carries the value of two lives than in the patient who stands for herself alone. Even if the trouble is purely reflex, it demands careful attention and a serious attempt at relief, not the empiric administration first of one drug and then of another till something is found which removes the symptom or under which the symptom spontaneously abates. Unfortunately, the human mind, though naturally of an inquiring nature, is prone to become satisfied with any string of words, provided the same answer is often enough rendered to the same question. Thus, when a fever which we do not understand at all, or which we strongly suspect to be an atypic instance of typhoid, is called ephemeral or continued or mountain fever, we feel that we have made a diagnosis. (It is not intended to imply that these terms are applicable to a fever which is essentially a unit.)

Paradoxic as it may seem, the physician who seeks something that is "good for what ails" his patient, is not usually a good therapeutist. Nor is the man who searches for phenomena that are "symptoms of" such and such a disease a successful diagnostician. We believe that the physician is a good therapeutist and a successful diagnostician because he cuts loose from the idea of tying a drug and a symptom to a disease name. It has occasionally happened that medical men of great influence, who should have been characterized by broadness of intelligence, have sought the nature and the cure of disease in the narrowest channels and have opposed the natural tendency of the profession to seek principles in a mass of technique, and to object to a routine application of a proposed method, without regard to individual

circumstances. Even the intention to be thorough in medical teaching has sometimes led to the codification of facts and such a shutting off of illumination from them as to give the student a very imperfect and very untruthful idea, because he was not allowed to view the truth with all the necessary sidelights. "What do you suppose a student told me when I asked him what cataract was?" said a surgeon in a faculty meeting of one of the prominent eastern colleges some years ago. All wondered what the ridiculous answer was. "Why, he answered that it was fatty degeneration," said the surgeon, with a laugh. "Well, John," said the pathologist, "that's just what I told him it was." Of course, such an occurrence is by no means a fair example of the instruction either at this particular college or at others, but it does represent a tendency to which every medical investigator is liable, namely, to see only one phase of a subject.

Too often has the will-o'-the-wisp of pathognomonic sign been followed into swamps of perplexity. It is a safe rule to drop from the medical vocabulary two words that we are often tempted to use—always and never. The foundation of scientific diagnosis is to go from a phenomenon of disease just to the state of affairs that has produced it. The disease should be named, not from symptoms and signs, but from the grouping of the conditions to which the former point. Moreover, it should be fully understood that naming a disease is only of the same importance as indexing one's visiting list. One may understand very well and treat successfully a disease to which he cannot assign a name, or he may call a disease by name without knowing in the least what it is.

The attempt has been made to draw a fine line between subjective and objective manifestations of disease—symptoms and signs. But, as in every other attempt to distinguish arbitrarily between subjective and objective, failure is encountered. In the strictest sense, careful study even of oneself and certainly of one's body becomes essentially objective. For practical purposes it may said that a phenomenon reported by a comparatively ignorant patient is subjective, while anything observed by trained senses is objective. The wheezing of an asthmatic or the rumbling of a dyspeptic is a subjective symptom if vaguely referred to by the patient, but it becomes an objective sign if heard by the physician, even in his own person. The other day the writer was surprised to find a high degree of hydrochloric acidity in a patient who mentioned belching of gas as a symptom. Carefully observed, belching is just as definite a sign as the demonstration of a distended, tympanitic stomach, and it is scarcely possible unless hydrochloric acid is diminished in amount. Cross-questioning revealed the fact that the patient had simply raised swallowed air after eating,

as so many persons do almost normally, and that he had confused a sensation of fulness and desire to belch with the actual passage of gas from the stomach. A cough, the discharge of feces and of urine, abnormalities of breathing and of appetite, are instances of phenomena that are essentially signs or symptoms according to the care used in observing them. Any stimulus that affects the nerves of sight, hearing, and smell of the patient, except centrally, may also affect the corresponding nerves of the physician. Pain, sensations of heat and cold due to differences of temperature between the internal organs and the skin, and hallucinations, are almost the only possible symptoms that may not be observed objectively as well.

For highly civilized man sight is the special sense by which the most definite knowledge is obtained. When a dog can both see and smell an object he seems to become acquainted with it equally by both these senses. We have lost almost completely the intellectual use of the sense of smell, and are gradually relegating hearing to a lower intellectual plane than sight. For instance, most of us can gain familiarity with a subject much more rapidly by reading a book than by hearing the same words read aloud. Thus inspection affords the most convincing evidence of disease. Indeed, the pathologist differs from the diagnostician mainly because he has concentrated his attention upon the visible traces of disease, especially when magnified so as to show details. He must literally see an organ to feel that he has any knowledge of it. The clinical observer, on the other hand, has trained himself to deal with more or less indirect manifestations of disease and to form mental concepts of diseased living organs; he may even have lost the power of recognizing the actual appearance of disease in the exposed organ. On somewhat the same principle we find men who are very well acquainted with persons and things through books, but who are quite unfamiliar with them in actual life. There is a basis of truth in the story of the editor of an agricultural journal who stopped to inquire what a certain cultivated plant was, and learned that it was corn.

So truly is inspection the culmination of physical diagnosis that the most ingenious and most scientific methods are solutions of the problem, how to see the effects of disease before death. Exploratory operation is sometimes called an ante-mortem autopsy, but the diagnostician, like the therapeutist, wishes not simply to perform his function, but to do so "quickly, safely, and pleasantly." The diagnosis of bacterial diseases may be taken as the type of the highest attainment in the direction of the demonstration, if not of disease itself, at least of an intrinsic element of disease. Yet practically satisfactory results have been attained only regarding tuberculosis,

and even here we must be on our guard against the innocent smegma bacillus and, possibly, the lepra bacillus. The former has recently been reported as found in sputum by Pappenheim. Gonorrhea, diphtheria, typhoid, pneumonia, and some less common diseases, such as cholera, relapsing fever, etc., are to some extent diagnosticable by examination for bacteria, but in each instance a very appreciable objection prevents the realization in practice of what is theoretically to be expected. Many general practitioners have informed the writer that they attach little importance to examinations for diphtheria made by boards of health, apparently not from any fault of bacteriologic technique, but because, clinically, diphtheria depends so much on mixed infection, while the true bacillus may occur merely as a foreign body. Animal parasites are, in general, only demonstrable by macroscopic or microscopic search, which is in either case quite simple.

Roentgen's wonderful discovery—which was almost brought to the practical stage twenty-five years ago—has rendered inspection possible for three departments of surgery—fractures, dislocations, and foreign bodies, including some calculi. Many thoracic lesions may be seen by the aid of a powerful apparatus—one very satisfactory for the limbs is quite worthless for the adult trunk—while the digestive tube and similar accessible parts of the body may be traced by the use of harmless powders in capsule, or distributed, according to the method independently announced by Boas and Dorn of Germany and the writer in February, 1898. (The writer's discovery was verbally announced in the summer of 1897.)

The diagnosis of blood diseases rests literally on an inspection of the tissue withdrawn from the body. For the most part chemistry is employed only to the extent of staining the cells. However, quite complete chemic examination of the blood is possible with amounts far less than were habitually abstracted by the older physicians, and with no more pain than is connected with the harpooning of muscle for demonstrating the presence or absence of trichinæ. The writer is at present engaged with the problem of estimating the hemoglobin of blood accurately by chemic examination of small amounts.

Parenchymatous renal diseases are recognized by the microscopic examination of the urine almost as plainly as by the examination of the dead organ—more so, if only macroscopic necropsy is employed. Perversions of function of the kidney and organic extra-tubular changes are accurately diagnosed chemically, and chemic tests are ultimately methods of inspection. The investigation of the stomach contents, of feces, and of various other mixed and unmixed secretions, may be included in the modern use of inspection as a diagnostic

means. Even thermometry consists in rendering fever visible in a column of mercury.

We have even reached the point at which the choice against inspection is decided by esthetic or economic reasons. For example, it is possible to inspect the esophagus and stomach by endoscopes, but these instruments are too expensive and too painful to be at present practicable. In some instances slipshod methods of diagnosis are employed simply because of the trouble or expense of investigating feces, stomach contents, blood, urine, etc. It would be quite beyond the scope of this paper to detail the various methods of diagnosis depending upon skilled sight, hearing, and touch. The writer has urged the importance of adding the sense of smell to the diagnostician's armamentarium whenever possible (*Medical News*, Aug. 20, 1898). Curiously enough, the fact that humanity progresses in spirals instead of straight lines is well illustrated in the tendency to employ sight and touch for the most accurate diagnostic work. In England especially palpation is being used almost to the exclusion of apparently more scientific methods by some few experts, who have gone so far as to map out the heart by palpating in the intercostal spaces. Really, this method is not as difficult as it might seem—at least the writer has been able with comparatively little practice to obtain results identical with those of auscultatory percussion.

As has been intimated, the art of diagnosis depends largely, indeed mainly, on the use of symptoms and signs that are far from being positive indications of any particular disease. Often the greatest help can be derived from signs that are not diagnostic at all, in the sense of leading to a disease name. For instance, indicanuria is indicative of many conditions and is not especially diagnostic of gastric ulcer, yet with other signs it is of great value in the diagnosis, not of the ulcer itself but of the fact that the intestine is filled with putrescible material, in this instance blood.

Cachexia and diminution of the output of urea are often spoken of as signs of malignant disease, the former being usually considered pathognomonic. Dilatation of the stomach, absence of hydrochloric acid, and the formation of considerable quantities of lactic acid—the last two especially—have been regarded as diagnostic of cancer of the stomach itself. All of these opinions represent the diagnostic fault of jumping from the indication, over the immediate condition that produces it, to the disease name. Cachexia is literally a bad state of the body; naturally enough it shows itself most frequently and most typically in the worst disease to which the body is liable; but serious ovarian disease, aggravated but non-malignant obstruction at the pylorus, with dilatation and catarrh of the stomach, certain forms

of hepatic sclerosis, and various other conditions, may produce emaciation, pinched features, muddy complexion, and other elements of cachexia, while many cancers, already developed beyond the operable stage, may be lacking in these symptoms. It is not worth while to discuss whether the malnutrition of malignant disease is something specific and different from similar appearances occurring in non-malignant conditions. Even if it be granted that cachexia proper occurs only in malignant disease, there is a pseudocachexia which is practicably indistinguishable at the period when it is of any value to the patient to diagnose for or against cancer.

Variations in the amount of urea have been sadly misunderstood in the past. The subject should be approached from the position of the physiologist. Urea is the ashes of proteid combustion. Cancer decreases urea because it decreases all vital activity, and this decrease does not begin to be appreciable till the cancer has ceased to be a local and eradicable condition and has become a fatal constitutional disease. If cancer is not in question, diminution of urea is often regarded as diagnostic of renal failure. This is correct to the extent that it would be logical to call the ashman lazy if he carried out a small panful of ashes. It may be that there has been no call for much combustion, or that fuel has been lacking. While under proper circumstances diminution of urea is a valuable sign of the inability of the kidneys to perform their function, it may indicate nothing more serious than that the patient has had a cold, has remained indoors, and has exercised little, thus calling for little oxidation, and that he has eaten little food that would ordinarily lead to the production of urea.

Failure of free hydrochloric acid has been put forth as pathognomonic of cancer, and more recently the same has been claimed for the formation of considerable quantities of lactic acid. Exceptions in both directions are so frequent regarding the first statement that it is difficult to understand how it could ever have been made. Failure to secrete hydrochloric acid usually means failure of nervous power. In atrophy resulting from chronic catarrh there may be an actual anatomic impossibility to form acid, but cancer rarely attacks the stomach in such a way as to involve the upper glands, whose parietal cells secrete hydrochloric acid. Any local or general disease which produces depression or innervation, probably of the pneumogastric, causes diminished secretion of hydrochloric acid. Cancer is, *par excellence*, a disease that produces depression of vital force, and therefore is usually associated with diminution of hydrochloric acid along with depression of other gastric and extrinsic activities. But cancer is not incompatible with free hydrochloric acidity, nor is its absence more than the

usual occurrence in the ordinary run of rather severe catarrhs of the stomach. As the writer and others have pointed out, it would be much more logical to consider the failure of rennet and pepsin as pathognomonic of cancer, but these may be suspended in severe typhoid, and the writer has observed a case of apparent failure of all digestive ferments—not, however, absolute, though nearly enough so for practical purposes—occurring in Addison's disease.

A priori reasoning is not of the best, but now that *a posteriori* experience has verified the prophecies, and led to the retraction of the extravagant claims made for the lactic acid test for gastric cancer, the writer would like to repeat what was said soon after this test was announced in America. Lactic acid may be produced from most carbohydrates, including, of course, those of the Boas test-gruels. It is formed by a number of bacteria, at the very least estimate two, probably half a dozen, and perhaps a dozen or more. It has neither been demonstrated nor even seriously claimed that any of these germs have a causal or other necessary association with cancer. None of them can thrive in the presence of notable amounts of free hydrochloric acid, though stomach contents delayed for a long time beyond the normal period of gastric digestion may show both hydrochloric and lactic acids. Now it is perfectly true that cancer of the stomach, and particularly an obstructive cancer of the pylorus, furnishes the ideal conditions for the development of lactic acid bacteria—it is not even certain that they are all bacilli—as well as of germs that produce other chemic substances associated with fermentation—for instance, alcohol, acetic acid, and butyric acid. Thus it is perfectly obvious that lactic acid, even after the Boas test-meal, simply indicates a failure of hydrochloric acid and a pretty firm colonization of the inevitable fermentative bacteria. A cancer not advanced far enough to prevent the secretion of hydrochloric acid, and not so situated as to cause stagnation, cannot be expected to manufacture lactic acid for the accommodation of the diagnostician. On the other hand, if there is stagnation and failure of hydrochloric acid in bad cases of catarrh and dilatation of the stomach, there will be a considerable formation of lactic acid.

Under the writer's care at present is an elderly man who presents the following contradictory symptoms: Cachexia confined to emaciation and slight sallowness, the latter being explicable by a sclerotic liver. Dilatation of the stomach and stagnation exist, but without palpable tumor. Occasionally there is slight bleeding, but no more than would be expected from the back-pressure in the portal vein. Lactic acid—without any precaution as to test-meal or previous lavage—is not present in excess, except on one occasion when the increased

amount of fermentation was evident from the odor during the extraction of the stomach contents. Hydrochloric acid is as uniformly absent. The rennet test is fair or good, but filtered chyme, after the addition of free hydrochloric acid, does not digest albumin. This last is a very exceptional condition, as the two ferments almost always rise and fall together. Such a case as this illustrates the paradox that sometimes the better one understands the conditions present, the more difficult does it become to make a diagnosis. The writer would lay considerable stress upon the odor of the stomach contents — a putrid smell, in the absence of much blood, or of stagnating meaty food, being scarcely ascribable to anything else than an ulcerating tumor. In the case alluded to no such odor is present.

In many instances examinations of blood, urine, feces, etc., that cannot be expected to be diagnostic in a restricted sense, still throw much light on the general conditions present. For instance, neither cancer of the pylorus nor of the duodenum would, as a rule, slough off fragments discoverable in the feces nor cause disturbances that would make it possible to diagnose cancer from appearances in the fecal mass; yet the absence of blood, the degree of digestion of various foods, the time occupied in the passage of recognizable constituents through the alimentary tube, the evidence for or against biliary obstruction, etc., would be of great aid. In diabetes, although sugar is the main diagnostic constituent, the estimation of urea is often of much greater importance. As a rule, a glycosuria is attended with normal elimination of urea, true diabetes with a marked increase. A diminution of urea usually indicates a favorable tendency and may presage a cure, or, on the other hand, it may indicate a failure of metabolism attended with the formation of the various poisons of diabetic coma. The quantitative estimation of salines, etc., in the urine rarely allows the physician to identify a disease which could not have been more easily determined by other means, but a better understanding of the case, particularly with regard to indications for diet and elimination, may be had from such examinations.

A thorough discussion of these and similar topics would be almost interminable, so the writer will conclude with a plea for a simple common-sense spirit in diagnosis that will lead directly from manifestation to immediate cause and will stop there, unless other circumstances warrant the drawing of more general conclusions. Let us drop the folly of a search for pathognomonic signs as mathematicians have abandoned the attempt to square the circle, and when some eminent authority, native or German, assures us that he can diagnose the existence of a rennet ferment in the moon because he has demonstrated the presence of green cheese there, let us not be too deferen-

tial, at least not to the extent of doubting our own senses more than once or twice in succession. The commonest politician knows that to control men he must understand the divers qualities that make up their individuality, that it is not enough to remember their names and faces. So the physician who expects to manage disease must not only be able to recognize it and call it by name, but his diagnosis must be what the name literally means—a thorough knowledge.

TUBERCULOSIS AND THE THROAT.

BY W. F. STRANGWAYS, M.D., FLINT, MICH.

I have given the above name to my paper as I wish to speak not only of tuberculosis of the throat, but also of the throat in patients threatened with active tubercular trouble, or who have tuberculosis in other organs but no visible infiltration or ulceration in the throat.

I will first speak of those cases where we see neither ulceration in the pharynx nor recognizable infiltration, but a peculiar pallor so out of harmony with other parts that no other disease can cause it. This pallor is striking in appearance and should always lead us to suspect a threatened attack of tuberculosis; likewise if we find a blotched appearance of the larynx.

With transient flushings, especially if the vocal cords do not approach each other in a normal manner, we should recognize a condition of serious omen to the patient.

These conditions may for years antedate the actual outbreaks of tuberculosis, and proper treatment may abort the threatened attacks, hence these symptoms are of the utmost diagnostic value.

McBride says: "There can be not doubt that the existence of marked laryngeal anemia, more especially if associated with fugitive flushings of the bloodless parts, should lead to a careful examination of the lungs."

Dr. Farrand says "that in those persons destined to suffer phthisis pulmonalis, there *always* exist pharyngolaryngeal signs very positive, very constant, that precede by much the pulmonary signs." I think we should substitute the word "generally" for the word "always" in that assertion.

Dr. Farrand gives these signs: "(1) Pharyngeal anemia; (2) faulty approximation of the cords with deficient action of the constrictores; (3) changed appearance of the arytenoids and the arytenoidal commissure."

In the first years of my practice I saw many patients anxiously demanding of me an answer to the question, "Am I threatened with

consumption?" and I was puzzled where the symptoms were suggestive but not pronounced. I believe some of you can sympathize with me over such difficulties. My experience with the laryngoscope during late years teaches me that in those cases I failed to look on the best diagnostic points.

During the last ten years I have examined the pharynx and larynx of every case of suspected incipient tuberculosis that consulted me, and as a rule I have been able to give a favorable or unfavorable opinion with a confidence that is only gained by watching the results in many cases.

If in a case of suspected incipient tuberculosis I find the pharynx and larynx normal in appearance, I decide that my suspicions had better be unmentioned. On the other hand, if the pharynx is pallid and larynx of a dull gray color, with faulty approximation of the cords, I advise the patient to do all that our science can recommend to fortify the system against the onslaughts of the tubercle bacilli.

I wish to place stress on these premonitory symptoms of tuberculosis. When the dread disease is well established we need only a few symptoms for diagnosis, but before any of the ordinary symptoms are developed anything that will help us is eagerly grasped.

Many writers support the assertion that the most certain diagnostic signs of the premonitory stage of tuberculosis are to be found in the pharynx and larynx. The conditions I have been speaking about are not only the forerunners, but are frequently associated with the disease to the last gasp of the exhausted patient.

The faulty approximation of the cords is commonly attributed to paresis of the muscles. There may be some paresis, but as a rule there is some infiltration around the arytenoids and the muscles which interferes with the movements of the cords. At times we find ankylosis of one or both the arytenoids.

McBride says: "Phthisis may manifest itself as a tubercular infiltration followed by true ulceration (true phthisis laryngea), or by changes which, while not due to local tuberculosis, are commonly associated with the presence of pulmonary phthisis. Abnormal sensations referred to the pharynx, with or without paresis of the abductors, are often due to neurasthenia, but may be the forerunners of pulmonary disease." This is an important statement, since we are prone to blame neurasthenia and hysteria for more than their share of the wrongs in patients' throats.

A condition of the larynx that may be a cause as well as a premonitory symptom is an intractable catarrh, especially if it is one-sided. Chronic catarrh of the larynx may produce pronounced structural changes, and when it has we should expect it to resist all

ordinary treatment; but this is not the form of disease I refer to. The chronic catarrh that is a forerunner of tuberculosis is never intensely red nor does it produce much thickening. The color is dull and pasty, the muscles are not very active. Local applications and internal remedies influence it to a very limited degree. The common people believe that catarrh may run into consumption, and as far as this particular type of catarrh is concerned, they are right.

Time will not permit me to enter on a discussion of the influence of ordinary catarrhs as predisposing causes of tuberculosis. I may simply say that any intractable catarrhal trouble of the larynx should make us suspicious of threatened tuberculosis. We should keep the larynx in as healthy a condition as possible. All colds should be aborted or cured.

I shall now mention a few things relating to tubercular infiltration and ulceration of the pharynx and larynx.

Active tuberculosis of the pharynx is met with very infrequently, and never without tuberculosis of other parts; indeed, it is generally a part of acute miliary tuberculosis, and is always fatal. The duration of life after this incurable malady starts is but a few short months at the outside. Treatment can only relieve. A greater than Koch must honor our profession and bless mankind before we can give a favorable prognosis.

We hope the bright and glorious day when we will be masters of the tubercle bacilli is not far distant, but until then we must admit our impotence in the presence of tuberculosis of the pharynx.

Post-mortems prove that tuberculosis of various parts of the body is often cured by nature, either with our assistance or in spite of our mistakes. We open the abdomen and cure tuberculosis of the peritoneum; we support and fix the vertebræ and cure tuberculosis of the bodies of the vertebræ; we excise tubercular glands from the neck and restore our patients to good health; but we rarely ever cure a patient if tubercular infiltration of the larynx occurs. The functions of the pharynx and larynx are so essential to life and well-being that they are in constant use from the first cry to the last struggle, and we can neither excise nor immobolize.

Tuberculosis of the pharynx is easily recognized. The shallow ulcers surrounding the bloodless membrane, and covered by a thick but small quantity of mucopurulent secretion, are so different from any other disease of the pharynx that once we see a case we have mastered the diagnosis.

Tuberculosis of the larynx is much more difficult to recognize. A typical case is easily recognized, but many cases are atypical because of the preceding catarrhal disease or syphilis; such cases are very

puzzling, yet even these should be diagnosed. Faulty movements of the cords, a dull grayish color, and some tumefaction, are sufficient symptoms on which some laryngologists base a diagnosis, while others must see the infiltration of ulcerative process.

These various requirements explain the difference in opinions concerning the frequency of tuberculosis of the larynx. Mackenzie claimed that one-third of all the cases of pulmonary tuberculosis have laryngeal complications, while others place the percentage as low as one in sixteen. My own observation places it about one in five. While men are its favorite victims, children are comparatively free from it. About twice as many men as women suffer from it.

Mackenzie said that in 500 cases, only thirty-five occurred before the age of twenty; 194, or nearly six times as many, occurred between twenty and thirty; while between thirty and forty there were 162, and 109 between forty and sixty. Mackenzie also says that of these 500 cases, 365 were male and only 135 female. Males are more exposed to the inclemencies of our climate, hence suffer more from catarrhal diseases, which seems to explain why more men than women are attacked.

This conclusion is strengthened by the fact that there is very little chronic catarrhal trouble of the larynx in childhood, the period when there is the least tuberculosis of the larynx. If this conclusion is well founded, it behooves us to pay much greater attention to chronic catarrhal troubles of the upper air-passages. Indeed, the pharynx and larynx have a much more important relation to tuberculosis of the lungs than is generally supposed. They are interesting fields in which we can study the pathology.

In the pharynx we see the shallow ulcers, irregular in shape, without any tendency to heal; the surrounding bloodless membrane may be dotted with tubercular deposits. While in the pharynx there is no part more prone than other parts to the first invasion, in the larynx there are places of decided proneness to the first attack.

As a rule we look to the region of the arytenoid cartilages for the earliest evidence of tuberculosis of the larynx. The first deposits are seen in the mucosa proper, just beneath the epithelium and about the vessels and muciparous glands. Sometimes the coats of the vessels are invaded, which has a marked influence on the blood-supply.

A sessile tumor in the interarytenoid commissure is said to be almost pathognomonic of tuberculosis.

Interference with the movements of the cords is said by many to be due to paresis of the muscle, and this view may be right if we admit that the paresis depends on infiltration of the muscular tissues.

Tumefaction is another important change.

Necrosis seems to begin in the center of the circumscribed masses of infiltration. The deeper deposits may cause necrosis of the cartilaginous structures. There is no tendency to cicatrization.

Prognosis of laryngeal tuberculosis is bad. Very few cases have been cured. Indeed, we have not conclusive evidence of our whole profession having cured a dozen. Not only is the ultimate prognosis bad, but death is rarely far distant after the tubercle bacilli have invaded the throat. One year is a fair average time to place as the duration of the disease after diagnosis. An occasional case may live two or three years, while many cases live but a few months.

Treatment gives relief and may postpone the fatal day, and patients as a rule are very grateful for what relief we can give them, since tuberculosis of the throat causes a great amount of misery unless it is relieved by local treatment. Constitutional treatment is required and should be given in each case according to the best judgment of the practitioner.

Local treatment consists in spraying, swabbing, cauterizing, and curetting. I have no experience with cauterizing, and do not advise it, since I think other measures are better. Menthol is an excellent application, and it may be used as a spray or by swabbing; it relieves pain, and stimulates. Silver nitrate has been a favorite remedy, but lactic acid is now the most highly extolled application; it is used by swabbing. Cocaine and orthoform are anodynes that must be occasionally resorted to when other remedies fail, and for making by their anesthetic action the application of remedies a possibility.

Professor Landouzy (*Journal of the American Medical Association*) formally states that the most marked predisposition to tuberculosis infection occurs in persons with white, delicate transparent skin, marbled with veins, freckles usually, the hair on the head or body, or both, auburn or red, iris blue, flesh soft, sweating easily induced, graceful outlines. This type is called Venetian in Europe, but not from any special prevalence of tuberculosis at Venice, which has rather a low death-rate from this disease, but probably on account of Titian's women. All or very nearly all of this type are tuberculous —in Paris, at least, he asserts. Next in order come the scrofulolymphatic, persons who have been tracheotomized or have undergone other trauma, etc., and especially persons who have had smallpox. Delpeuch calls attention to a passage in Hippocrates' "Epidemics" describing tuberculosis, and the persons affected as all having red hair and blue eyes, in his experience, the description being almost identical with Landouzy's conclusions 2329 years later.

CORRESPONDENCE.

FRUIT IN DIET.

To the Editor of THE MEDICAL AGE:

Since the presentation of "Dietetic Points" by Dr. Inglis in your issue of December 10, 1898, was with the avowed intention of eliciting discussion, I am certain that the frank admission of a lad in the profession of his inability to follow the author's logic will not place him in so hazardous a position as that of antagonism to the author of the most excellent paper in that valuable edition.

We too have made some "careful observations in actual practice" during the past decade, and while the results may be chaotic and not distinguished by marked originality, they have at times been helpful to us in solving certain gastronomic problems. The particular point at which we must take issue with the Doctor is his vigorous denunciation of the eating of ripe fruit. He says "hogs will not fatten upon apples alone." Quite true, but what successful grower of stock *undertakes* to develop that stock upon a single article of diet. Go see the patriarchal Scot, that prince among feeders; see his turnips, his beets, his carrots, his apples. Why will his favorite colt—the apple of his eye—take apples from his pocket? He has been taught the trick by the doting master, who well knows the value of fruit as a laxative.

But to apply the principle to your patient. How many of your patients suffering from chronic constipation are absolutely relieved during the summer months? Why did the old family doctor say, "Eat plenty of fruit?"

Just here the Doctor's query, "What is ripe fruit?" is certainly opportune, and all the more so is his laconic answer, "Woody fiber holding in its spongy pores a quantity of flavored juice." Ah! the trite definition is good. Even now methinks I stand in the old peach orchard on the farm, before breakfast too, and take my choice Did you say a quantity of flavored juice? Well, I should say! I am not prepared to advocate the ingestion of fruit in the quantities exemplified in those juvenile days, but who could malign the fruit that grew upon that tree, or suffer harm from the eating of any reasonable quantity thereof?

But what is this same juice of which the Doctor speaks? Largely water. The same water which he treats scientifically later in his articles.

Why should the average working or business man "start up his

circulatory apparatus with a cup of coffee?" Why habituate himself to a stimulant so potent without a cause?

What wonder the Doctor complains that the early morning hour is the "ebb-tide" with him, and his appetite for breakfast is correspondingly poor.

Try a little ripe fruit as a stomachic. I as one of the country cousins am prepared to make my prettiest bow in response to the allusion to our "native sense," but beg to explain that the method is not universal, and many of our number prefer to eat our fruit, not voraciously "with nuts and cheese before retiring," but rationally—though amply—for breakfast.

We read with delight the remarks of the Doctor relative to the drinking of water, and noted with sorrow the demise of his desiccated aunt. We, with the Doctor, deplore her refusal to drink. But through what peculiar metamorphosis has this same water passed in the peach or pear that it is rendered unfit to be taken into the stomach.

I can forgive the aunt who in her *dotage* boasted that she never drank water. But shall I forgive the nephew who renders conspicuous a very clever article by making the boast that he never eats ripe fruit? Never!

E. B. Coolley.

Pilot, Illinois.

It is stated in the *British Medical Journal* that the second edition of Graefe Saemisch's treatise on ophthalmology contains a very interesting essay on the study of eye diseases in antiquity by Professor Hirschberg. The oldest document bearing on the subject is a papyrus discovered at Thebes in 1872 by Ebers, who assigned it to a date about 1500 B. C., 1000 years before Hippocrates. From it we learn that there were at that time three kinds of medical practitioners in Egypt—namely, physicians, surgeons, and "thaumaturgists," whose memory we shall probably not calumniate by regarding them as the prototypes of our own faith-healers and miscellaneous quacks. The papyrus describes the three most important symptoms of eye diseases as excessive secretion, redness, and swelling. Among the remedies advised are myrrh, frankincense, acetate of lead, onion, verdigris, the dung of crocodiles and gazelles, brain of tortoise mixed with honey, woman's milk, but especially antimony. All Egyptians, as is shown by the boxes found with mummies, used ointments to blacken their eyebrows and eyelashes. Virchow, who analyzed the contents of one of these boxes, found that the collyrium consisted not of antimony, but of sulphate of lead.

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EDITORIAL ARTICLES.

TESTIMONY OF THE SENSES.

"This world is all a fleeting show, for man's delusion given," wailed poor Dr. Young, when the woman chosen of his affections cruelly told him that, however much she might love his soul, she could not abide an alliance with the frail house that enshrined it. Since that day thousands or millions have sung the mournful song, without as good as the author's excuse. It was no original thought of the love-sick poet. It probably occurred to the first speculative lounger who thought he recognized a phantom under world mimicking the upper in some still pool. It certainly creeps out in the earliest speculative writings. It had its disciples in India thousands of years ago. It was a fundamental dogma of the founder of Buddhism, who confessed it impossible to tell how far the world without was a phantom, how far a reality. The followers of Pythagoras were more positive; the world and its phenomena, they said, were all illusions. Centuries later the Egyptian mystic Plotinus taught the same doctrine, that the external world was a mere phantom; and even the mystical schools of philosophic Christianity took it up in turns. Nor did Mohammedan philosophy escape the delusion. The Arabian philosopher Algazzali writes in this strain: "I said to myself—during sleep you give to visions a reality and consistence, and you have no suspicion of their untruth. On awakening you are aware that they were nothing but visions. What assurance have you that all you feel and know when you are awake does really exist?"

In every age the mystically inclined have delighted in dreaming that everything is a dream. A favorite American poet does it prettily in one of his conceptions. He lies on a grassy river bank, watching the clouds sail across the sky, seemingly far down in the still water.

The image of a kingfisher flits across his vision. He knows that a corresponding bird flew through the air over his head, while he gazed upon the phantom beneath his feet. He calls it a real bird, but what assurance has he that the kingfisher in the air is any more real than the image in the water? May it not be merely the visible reflection of an invisible reality? "All this is what you call material," said a fanciful friend the other day, in response to some remark implying belief in the absolute existence of those "permanent possibilities of sensation" known as *things*, and he continued: "All this is but the fleeting image, the reflection as in a glass, of the truly real—that is, the spiritual—to which we shall some day attain."

Just here, perhaps, in the misapprehension of the phenomena of reflection, we may find the key to the entire scheme of mystical philosophy, and prove it based, not on the refinements of reason, as its disciples fondly imagine, but on an optical blunder. We find also a sufficient answer to the aspersions which the same school of thinkers are wont to cast upon the integrity of the senses. Sitting at a table we seem to see at this moment, in the broad window of a shop across the street, the image of a workman repairing the street. By direct vision we can see neither the man nor the work he is engaged upon. Across the room hangs a mirror — in it appears the reflection of a window, and in the window the reflection of a passing cart. Neither cart nor window is directly visible from where we sit. Using a form of speech inherited from an unscientific age, we say we see, in the glass and on the window, images of the objects mentioned—but in reality we see nothing of the sort. The cart seen through the double agency of the window and mirror is no image of an image, but the cart itself, as positively as if we were looking directly at it. The bending of the light rays in their passage from the objects to our eyes does not affect the message they bear in the least. In the case of the man, the light which brings us information of him is bent or turned back once, in the case of the cart twice—our vision is indirect, not direct, yet it is absolutely the man and the cart we see, not mere images of them. So with the poet's kingfisher. It was the living creature he saw, not a phantom—the seeming under world was really the upper world indirectly seen. In this and all similar cases the delusion lay in the mind of the mystic, not in the thing seen.

Equally so with the Arab philosopher's dreaming. It matters not whether the reflection is at one or a thousand removes — it is the reality that we see. By what means the brain mingles and combines the impressions of sense in dreaming we may not know; but this one thing we know, it always combines and never creates. The man blind from birth sees no visions in his sleep; the man born mute and deaf

hears no voices in his dream world. The alleged untrustworthiness of the senses we have abundant reason to deny. In health they invariably tell us the truth. We frequently misinterpret the message they bring, it is true, but that is no fault of the senses. The interpretation of sense impressions is something to be learned—we never learn it fully; we are liable to blunder throughout all our days, but that gives us no license to call our senses liars. It is our judgment, not the sense of sight, that is deceived when we stumble with the mystics into the "world behind the looking-glass." We learn, for example, to associate certain plays of light and color with certain natural gems. When we see the same effect produced by artificial pastes, we may mistake them for the real gems; but it is not our eyes that cheat us—they simply report the flashing lights, and through our lack of knowledge they make an inference not in accordance with fact. Again, when we see the same play of color, we say it is produced by a gem, natural or artificial—and it may be neither, but only a bit of glass with tinsel underneath. We discover the imitation, and therefore know that there are more ways of producing that particular play of color, and we estimate the probable one in any case by the attending circumstances.

We witness a spectacular play, and see the actors luminous with—not real gems, for they are too numerous; possibly imitation gems, but still even then they would be costly, if well made. We reason then that they must be tinsel-lined articles of glass. But here also we may be wrong; they may be no gems, real or artificial; they may be no glass-covered bits of tinsel, but simply angular cavities of bright metal bathed in colored light. Did our eyes deceive us? Not at all. They simply told of the flashing lights, the mechanism of the flashes being left for the other senses to discover and determine. A child bred in a theater, and used to the phantom gems only, might be as thoroughly deceived by real gems as we were by the metallic reflections; but in neither case would the deception lie with the sense of sight. We not only wrong our honest senses, but lose our grip upon this most substantial world of ours when we let mistaken philosophers persuade us to doubt the testimonies they bear.

EDITORIAL NOTES.

The Gospel of Relaxation.

Where can a more striking example of the truth of the gospel of relaxation be found than in the following experience of a writer in the "System of Practical Medicine:" "Some years ago I collected the

statistics regarding the lives of stockbrokers in a certain city, and was surprised to find that nearly every person who lived a sober life and continuously studied the ups and downs of the money market failed either mentally or physically in a short time—less than a dozen years —ultimately disappearing from active life. On the other hand, the men who were operators of great skill and coolness, and who lived regularly most of the time, but occasionally gave way to the drink habit and disappeared several days at a time on account of helpless drunkenness, lived longer and had fewer mental disorders. This, of course, cannot be construed into an argument in favor of drinking even occasionally, but was to my mind a very strong indication of the benefit coming from the occasional complete relaxation from intense mental anxiety. Frequent vacations passed in the woods, or at the seaside, without social duties, and where temporarily men could resort as nearly as possible to primitive life, even for short periods, would, I am convinced, be much better. Protracted anxiety without rest breaks more men than does hard intellectual effort."

Will not every overworked physician after reading this go a-fishing.

The Odor of Death.

A French medical journal affords the following fine example of the beauty of *post hoc propter hoc* methods of reasoning. An old lady became sick and died. A few days before death nothing could induce the cat to stay in its owner's room. The cat passed on to a new mistress, who in turn sickened and died, and again the cat refused a few days before her death to remain with its owner. From this it is argued that the cat can detect an *odor mortis* and may therefore be used as an aid in making a certain prognosis. Possibly there were other reasons for the want of fidelity in this particular cat. Cats have business of their own which occasionally takes them away visiting. While the suggestion is a valuable one, this particular instance is certainly inadequate foundation in itself for a theory of *odor mortis.*

Putrefaction and Life-permanence.

Putrefaction is probably not death, but the contrary—the life that follows death, or a sort of resurrection. The laws of conservation and of conversion apply to vital as well as to inorganic forces. Fermentation or putrefaction is a vital process, reciprocally generated by and generating inconceivable millions of impalpable organisms, which charge the atmosphere and are everywhere at work, transmitting dead organisms into elementary living ones—and why not passing on the vital activity into higher forms?

ITEMS AND NOTES.

THE plague continues in Oporto with little change.

AT the present time there is a large number of cases of typhoid fever in Boston.

SIR MICHAEL FOSTER will deliver in San Francisco "The Lane Medical Lectures" for 1900.

A SLIGHT epidemic of anthrax among cattle has appeared in southern Chester County, Pa.

THE late Charles J. Stilley has left the department of political economy of Yale the sum of $75,000.

TWO cases of beriberi have been discovered at Biloxi, Miss., by the sanitary inspector of the State Board of Health.

THE late Dr. James E. Graham, of Toronto, was the first to closely observe and report cases of acromegaly in America.

YELLOW FEVER has been reported from Key West, where up to September 5 there were twenty-eight cases with three deaths.

DR. HEINRICH ADLER, editor of the *Wiener Medicinische Wochenschrift*, has just received the Knight's Cross of the Franz Joseph Order.

IN several of the most malarial districts of Cuba will be planted large numbers of eucalyptus trees with a view of bettering the sanitary conditions.

A SHORT time ago nearly one hundred London schoolchildren were poisoned by food taken at a picnic at Blackheath. Fortunately no deaths occurred.

YAWS is prevailing to an unusual extent in Jamaica this summer, especially in the Yallahs district. The island is also suffering from a prolonged drought.

YELLOW FEVER has spread from Tuxpan, Mexico, to a number of smaller towns along the coast between that place and Tampeko. The daily mortality is great.

DR. MARIE, of the Pasteur Institute, has been appointed by the Sultan of Turkey to direct the antirabic service of the Institute of Bacteriology of Constantinople.

An army sanatorium will be established at Fort Bayard, New Mexico, for the treatment of officers and enlisted men of the army suffering from pulmonary tuberculosis.

The Public Health Committee of France has just decided that precautions are to be taken against the transmission of plague by rats and mice coming from lazarettos and shipping.

Surgeon Fairfax Irwin, of the Marine Hospital Service, now in Europe, has been ordered to investigate and report the situation regarding the bubonic plague, now appearing in Portugal.

It is just one hundred years ago (being in 1799) that the immortal Jenner made his first public announcement of the value of vaccination, although he had worked at it for thirty years or more. Jenner died in 1823.

In Chicago there has been an association formed for instituting legal proceedings against a Christian Scientist named Dowie, at whose place several deaths have occurred recently as a result of the neglect of medical treatment.

Prof. Robert Bunson, a noted scientist of Heidelberg, is dead. He spent many years of his life in the analysis of gas, mineral waters, and to the phenomena attending combustion, and was the founder of the spectromanalysis.

Hoveloch, a celebrated French author, in his "Science of Language," gives us the origin of the word "cadaver," so common to all medical students, in the following manner: It is derived from three words, *ca-io*, *da-ta*, *ver-mibus*, meaning "a body given to worms."

The clinical method of teaching surgery was first systematically and persistently undertaken in London by Sir Benjamin Brodie, one of the most distinguished surgeons of two generations ago. It is said that for many years Sir Benjamin Brodie's income was $50,000 a year.

The Académie de Médecine of Belgium has decided in favor of the principle of the compulsory notification of infectious diseases. The debate was prolonged, and was only brought to an end by the application of the closure, when fourteen voted for compulsory notification, five against, and five did not vote.

Military authorities in England, it is said, have at last decided to make a change in the footwear of the British infantry soldier. The army shoe is constructed to wear well, but little attention is paid to comfort or convenience. This is to be altered, and a shoe that combines comfort with endurance is to be supplied.

PLANS are well matured for the creation of a college of comparative medicine at Harvard University, an institution which will promote research work on original lines. Three hundred thousand dollars has been set aside for the erection and maintenance of a laboratory. Six hundred thousand dollars additional will be required.

EPIDEMICS of dysentery have occurred in the United States from 1749 to 1753, from 1773 to 1777, and also from 1793 to 1798. Again, from 1847 to 1856, and also during the late civil war, it was epidemic in both armies. There were reported 259,071 cases of acute and 28,451 cases of chronic dysentery. It was epidemic in Cuba among the soldiers.

THE pharmacy of K. I. Ferrin, at Moscow, Russia, is thought to be the largest in the world. Two hundred and ninety-three men are employed in the wholesale and retail departments. As many as 1200 prescriptions are put up in one day. If poisonous drugs are used in putting up a prescription, the checking of weights is done by a weigher specially employed for that purpose.

THE Illinois Society for the Prevention of Consumption, says the *Medical Record*, is preparing plans for a State sanatorium for consumptives, which it will ask the next Legislature to build. The Illinois State Board of Health has been investigating the advisability of such an institution, and reports favorably. The Legislature will be asked for an appropriation of half a million dollars for the construction of the sanatorium.

A SINGULAR case of blood poisoning has just been reported in London. A woman fell and slightly grazed her wrist, and to protect the injured surface she covered it with stamp paper, or strips of the gummed paper which borders the sheets of postage-stamps. This adhered firmly and completely sealed the wound, but pain and throbbing quickly set in, septic symptoms developed, and death occurred within sixty hours.

SEVEN towns in Belgium, including Bruges, have a sterilizing plant which cooks the meat from slightly tuberculous cattle. It is then sold, with the juice, at a low price, and the proceeds given to the proprietor of the animal, which, with the indemnity accorded by the government, reduces to a minimum his financial loss. The minister states that in some places the demand for this wholesome and appetizing meat far exceeds the supply.

THE pharmacy in Germany, says an exchange, must have, besides the store and separate prescription room, a room for dry storage, a

cellar, a laboratory, and a compounding-room, and be accepted as suitable by the Regierungspresident. It is inspected once in three years by a commission consisting of a physician, a druggist, government official, and a policeman. Poisons have to be kept locked up in a special compartment with special scales.

According to the *Medical Record*, some time ago the Portuguese residents of Rio de Janeiro subscribed about 500,000 milreis toward the construction of a cruiser for the Government of Portugal. The amount was far below what would be needed for building any sort of a war vessel, and Queen Amelia has requested that the money be used to build a sanatorium for indigent consumptives. The suggestion is said not to have been well received by some of the patriotic subscribers to the fund.

The recent tuberculosis congress appropriated $800 to be awarded as a prize for the best or the two best works on "Tuberculosis as a Folk-Disease, and the Struggle Against It." They must be written in popular style, for general distribution, not be longer than three to five printed sheets, and each have a motto. They are to be sent to Prof. B. Fraenkel, 4 Bellevue-Strasse, Berlin, before December 4, 1899. The work obtaining the prize becomes the property of the Central Committee. The judges are v. Leyden, several other professors and army officers, and the Duke of Patibor.

At the beginning of the Revolutionary war there were only one book, three reprints, and twenty pamphlets by American medical authors. To-day there are 7000 books and reprints and a large number of pamphlets. There are 300 books and pamphlets written by American authors annually, and 5000 journal articles. In 1879–1880, 10,334 books and journal articles were written in the United States in comparison with 7476 written in England at the same time. The Americans are probably the greatest consumers of medical literature, and in medical libraries are foremost.

Medical men of London have organized an association called the Sanatorium, Limited, the object of which is to provide sanatorium treatment for middle-class patients suffering from pulmonary tuberculosis. The ground is on a southern slope, well wooded with pine trees and protected against cold winds. The highest part is over 400 feet above the sea level; the sandy soil (lower greensand) dries rapidly after heavy rain, and a plentiful supply of pure water will be obtained by sinking a well. The object of the company is to make the undertaking a self-supporting and progressive philanthropic enterprise.

THE Harlem Hospital (*Philadelphia Medical Journal*) has a patient who came voluntarily to be treated for alcoholism. His wife had been away in the country for several weeks, and he had been, according to an expression which has become popular this summer, "spending his wife's vacation" in overstimulation. The peculiar phase of his trouble was that while he was all right on the street he lost control of himself as soon as he passed into a park or other open space. He is aware of his difficulty, and reported to the hospital physicians that he has been affected that way for several years since he was a witness to a fatal accident while climbing a Swiss glacier.

A GENTLEMAN, says an exchange, received a note from his lawyer which he was unable to decipher. On his way to his office he met a friend at the door of a chemist's shop. The friend, after vainly attempting to read the note, suggested that they step inside and hand it to the chemist without comment. The chemist, after studying it in silence for a few minutes, stepped behind the prescription case, and in a short time returned with a bottle of medicine, duly labeled and bearing directions. When the gentleman saw his lawyer he was informed that the note was a notice for him to call at his office between 1 and 4 P.M. the following day.

ACCORDING to the *Journal of the American Medical Association*, while every effort is being made in this country to raise the standard preliminary to a medical education, the French have lowered theirs, and by a recent decree are to admit graduates from the so-called "modern" course—chemistry, physics, and natural history—and no longer exact the diploma of the "classic" course—letters and philosophy. A similar movement has been agitated in Germany, but is frowned on in official circles, which even refuse to accept the classic diplomas of the Swiss universities, on account of the fact that Greek is optional and may be substituted by a modern language.

A LABORER on a roofed pier in the eastern district of Brooklyn has presented, says the *Philadelphia Medical Journal*, an additional detail to the records of bone fractures. He was accidentally swept off his high perch by a canting piece of timber, and fell a distance of eighteen feet, striking on his hands and knees on the floor of soft pine. The injuries which he sustained were a fracture in each leg above the knee, a broken kneecap, and grave internal injuries. The ragged end of the bone in the left thigh pierced the flesh and skin, and was forced a distance of an inch and a quarter into the plank. As the man rolled over, a two-inch section of the bone was snapped off and remained fast in the piece of timber. It yet remains uncertain what shall be done for the patient in the way of restoring the missing bone. It was necessary to use a chisel in removing the bone from the plank.

NEW PUBLICATIONS.

ANATOMY OF THE NERVOUS SYSTEM.

The comment of the wise man made so long ago—"Of the making of many books there is no end"—is still true, and most of those now published come to fields already well filled. This volume, however, is a happy exception, for its existence has been long called for by the want felt by many teachers of a volume in English which should discuss comprehensively and practically the anatomy of the nervous system, embodying the extensive researches which have been made along this line of late years by a host of active workers.

That the present work is up to date is attested by the author's expressed obligations to "the magnificent works of Cajal, Edinger, Flatau, Dejerine, His, Jakob, Koelliker, Lenhossek, Quain, Retzius, Starr, Van Gehuchten, Wernicke, and others."

The treatment of the subject is systematic, clear, and thorough, beginning with the histological elements of the nervous system and closing with its embryology. A valuable chapter is added on the technique of the macroscopic and microscopic examination of the brain and spinal cord.

The print is especially good, and paper and binding excellent. The illustrations, most of them original, are of much more than usual merit and are beautifully printed. The book is one of great merit, and will let light into dark places for many an earnest student of the nervous system, whether he be teacher, undergraduate, or practitioner.

C. W. H.

The Gross and Minute Anatomy of the Central Nervous System. By H. C. Gordinier, A.M., M D., Professor of Physiology and of the Anatomy of the Nervous System in the Albany Medical College; Member American Neurological Association. With 48 Full-page Plates and 213 Other Illustrations, Many of which are Printed in Colors, a Large Number Being from Original Sources. Philadelphia: Blakiston's Son & Co., 1899.

PELVIC INFLAMMATIONS.

This little book is an elaboration of the lectures delivered by the author in the New York Polyclinic. The author maintains that some confusion exists in the profession regarding the most successful methods of treating pelvic inflammations. He therefore endeavors to inform the reader what should be done in all cases of infective inflammation of the pelvis. The spirit predominant throughout the book is that of aggressive interference, although the author has also laid down a palliative method of treatment of each disease in which operation cannot be done. Good service has been done in directing the attention of the general practitioner in an impressive way to the necessity of surgical treatment of the infectious pelvic diseases of women.

The Treatment of Pelvic Inflammations Through the Vagina. By William R. Pryor, M.D. With 110 Illustrations. Philadelphia: W. B. Saunders, 1899.

AMERICAN POCKET MEDICAL DICTIONARY.

In a very conveniently sized volume, one which is literally a pocket dictionary, the editor of this lexicon supplies us with definitions and pronunciations of over 26,000 of the terms used in medicine and kindred sciences. He also adds sixty useful tables. The work would seem to be all that its title defines it—"The American Pocket Dictionary."

American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, A.M., M.D. Second Edition, Revised. Philadelphia: W. B. Saunders, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Operations in Gastric Ulcer.

L. A. Bidwell (*American Journal of the Medical Sciences*, September, 1899) says that the surgical treatment of gastric ulcer is a comparatively new branch of surgery, the first operation having been performed as recently as 1881, but since that time several hundred operations for perforation of the gastric ulcer have been recorded in various parts of the world. Dr. Bidwell says that the classes of cases of gastric ulcer in which an operation should be done are as follows:

1. In all cases of perforation at the very earliest possible moment; also in subphrenic abscess.

2. In cases of hemorrhage: (*a*) when there is continual oozing of blood, especially if the stomach be dilated; and (*b*) in cases of repeated severe hemorrhage.

3. In cases where there is severe pain and vomiting unaffected by treatment, and which is producing progressive emaciation.

4. In cases of dilatation of the stomach from contraction within or from adhesions outside the stomach.

The operations to be performed are: In Class 1, laparotomy and suture of the ulcer; in Class 2, gastrotomy and suture of the ulcer, with a purse-string suture, combined with gastroenterostomy; in Class 3, gastroenterostomy, in order to give physiological rest to the ulcer; and in Class 4, either gastroenterostomy or, if the pylorus be affected, pyloroplasty or pylorectomy.

As the surgery of gastric ulcer is a comparatively new subject, the author has had, so to speak, to make a case in its favor. It has been his endeavor to show that no patient ought to be allowed to die either from perforation or from hemorrhage from a gastric ulcer, without a surgical effort being made to save him; that the earlier such effort is made the better the chance of success; and finally, that surgery offers much hope of success in other cases which resist the art of the physician.

Sinus Occurring in the Site of a Chancre.

Dr. Ramon Guiteras (*Journal of Cutaneous and Genito-Urinary Diseases*, September, 1899) reports an interesting case. Five months ago the individual developed a sore on the penis. Six weeks afterwards the regular symptoms of secondary syphilis appeared—head-

aches, pains in the bones, eruption, mucous patches in the mouth, sore throat, etc.—and the chancre, which was situated in the middle of the dorsum of the penis, was still unhealed. The patient was put on a regular treatment of mercury, and was kept on it for two months. The surface of the chancre healed, but the nodule remained about the same size, and a little sinus opened into it. On entering this sinus the probe went down to the depth of about half an inch, so that it was thought to connect with the urethra, and as the patient had had an attack of urethritis at the same time as the initial lesion, it seemed possible that the sinus might depend upon the gonorrhea and prove to be a periurethral fistula. Dr. Guiteras concluded to lay open the lesion, as it seemed to him that the induration extended down beneath the deep fascia of the penis between the corpora cavernosa, so about four months after the lesion appeared he inserted a knife into the sinus and incised the chancre. On the following visit the lesion resembled the two halves of a strawberry, each side being red and granular. The wet dressing of black wash was continued for three weeks, at the end of which time the lesion was healed. During all the time that the lesion was in this condition the patient suffered a great deal of pain when he had erections. After the sinus was opened this ceased. He said the case was rare where it was necessary to use the knife in order to cure an initial lesion.

The Cataphoric Treatment of Cancer.

E. Belton Massey (*Journal of the American Medical Association*, Sept. 9, 1899) draws the following conclusions from his experience in the treatment of cancer by cataphoresis:

1. The massive diffusion of nascent mercuric salts within a growth or cavity of the body by an electric current constitutes a novel therapeutic procedure of great value in the destruction of foci of malignant or non-malignat germ growths, when said growths are so situated as to permit of penetration and drainage.

2. This cataphoric destruction of the germs of a primary cancerous growth *in situ*, including outlying colonies and so-called roots of prolongation, permits the preservation of the unaffected portions of the organ in which it is situated, and offers greater security against a recurrence of the growth than efforts to remove the living malignant organisms by cutting operations.

3. While the cataphoric method may be employed as a palliative in non-operable malignant growths, and may at times cure them, its chief value is in the total destruction of the malignant germs in the early stages of the primary growths, and in the same stages of purely local recurrences.

Clubfoot and its Surgical Treatment.

J. H. Huntley (*International Journal of Surgery*, September, 1899) says: "All cases of congenital talipes can be corrected. Never use the knife on a case that can by manipulation be brought into a state of correction and maintained there without causing great distress to the patient. Operate as early as possible, but remember that maturity is no obstacle to a successful operation. Cut the tendo Achillis first always subcutaneously, and master the equinus part of your deformity. Do the rest of your operation subcutaneously if a state of supercorrection can be secured thereby; if not, make a division of all the soft parts. If this should fail after great force has been exerted, do an osteotomy as a last resort."

MEDICINE.

Scarlet Fever Reproduced by Inoculation; Some Important Points Deduced Therefrom.

J. W. Stickler (*Medical Record*, Sept. 9, 1899) says that the inoculations were made with a hypodermic syringe. The point of the needle was introduced into the skin, never through it into the subcutaneous connective tissue. Mucus obtained from the throat and buccal cavity (soon after the characteristic eruption appeared) of a patient who had a mild attack of scarlet fever was the material used for the inoculations. From a series of ten cases the writer concludes: (1) The mucus of the throat and mouth has been shown with absolute certainty to contain the contagium of the disease. (2) The early eruptive stage of scarlatina is exceedingly infectious because of the presence in the discharges from the mouth and throat of the special poison of the disease. (3) The contagium of the disease being in the mouth and throat secretions, care should be taken not only to disinfect these parts as perfectly as possible, but to keep the tongue, mouth, and lips constantly moist, if possible, in order to prevent the contagious principle being forced into the air of the room by the exhalations of the patient. (4) Mouth and nose wipes should be used instead of spit-cups and costly handkerchiefs, and they should be destroyed by fire before the discharges on them dry—*i.e.*, at once. If fire be not available, disinfecting solutions should be used strong enough to render the poison inert. (5) The soiling of the bedclothing and personal apparel with mouth discharges should be prevented if possible. In the event of such contamination, they should be disinfected as soon as possible. (6) No toys or implements of any sort that cannot be boiled or subjected to the strongest germicidal solu-

tions should be given the patient, as they are apt to become soiled by the mouth secretions. (7) Those who minister at the bedside should be especially careful as to personal contamination and disinfection from the moment they enter the room. (8) The nostrils should be taken thorough care of, as the morbific matter which finds its way into these parts will, in the dry state, easily find its way into the atmosphere of the room, thus making the spread of the disease more probable.

Four Cases of Malarial Enlargement of the Spleen Successfully Treated by the Topical Use of the Seton.

S. Tafazool Hussain, C.M.S. (*Indian Medical Record*, Aug. 9, 1899), reports four cases successfully treated in this manner. The author says he finds this method to be quicker and safer than treatments with antipyretics and antiperiodics, which frequently have a fatal termination, and that his *modus operandi* is to, with the finger and thumb of the left hand, pinch up a fold of the skin lying between the eighth and tenth rib of the left side and pass a curved bistoury (perfectly clean and aseptic) right through the fold of the skin so held. The space between the upper and lower puncture should be about two inches, and care should be taken not to go deep enough to wound the upper surface of the ribs. By means of an eye-probe two or three strands of sterilized stout sewing cotton or sterilized horsehair are passed through the wound, and then removing the probe the free ends of the suture are tied together so as to form a loop, which ought to be loose enough to pull it around easily two or three times a day. When the spleen decreases and the necessity for irritation ceases to exist, the suture may be withdrawn and the wound allowed to heal.

On the Loss of Knee-jerk and on Peripheral Neuritis in Diabetes Mellitus.

Karl Grube (*Lancet*, July 22, 1899) found that in 320 cases of diabetes mellitus the knee-jerk was lost in eighty-four—25.3 per cent. The frequency of the absence of the knee-jerk was found to vary with age, increasing with advanced age. In those cases regarded by the writer as slight diabetes, the loss was present in 49.1 per cent, while in the severe form in only 23.9 per cent, which shows that the loss of knee-jerk cannot be regarded as a sign of bad prognosis. The writer concludes that three manifestations of nervous disturbances caused by the increase of sugar in the blood are met with: (1) Cramps or acute irritation of nerves, probably not accompanied by any material change

in the nerves; (2) neuritis; (3) a slow degenerative or nutritive change in the nerves, which seems to have a preference for the crural, accompanied by loss of knee-jerks, but also occurring in other nerves, as, for instance, in the optic. Impotence, so frequently a symptom in male diabetic subjects, is also probably caused by nutritive changes in the corresponding nervous apparatus.

Tuberculosis and Syphilis.

It is generally admitted, on clinical grounds, that syphilitic infection in an individual already suffering from tuberculosis tends to aggravate the prognosis, but this is not invariably or necessarily the case. In a recent number of the *Gazzetta degli Ospedali* (*Medical Press*, Aug. 23, 1899) Dr. Monteverdi relates the case of a young man who presented well marked physical and bacteriological evidence of pulmonary tuberculosis. The patient subsequently developed a syphilitic rash, and the interesting feature of the case is that as the syphilis followed its evolution the pulmonary symptoms subsided and ultimately disappeared. Six years have now elapsed, and no return of the lung trouble has taken place. As this is not the only case of the kind which has come under the author's observation, he urges that the generally received view, even if in the main correct, must not be accepted as absolute. Observations of this kind present a special interest, because it is quite possible that the human organism may prove the battle-field of antagonistic microbes, one of which is destined to oust the other.

The Influence of Heredity upon the Drink Habit.

G. Simms Woodhead, in *The Lancet* of July 29, 1899, takes exception to Reed's theory of immunity against drunkenness obtained by long-continued usage of alcohol through successive generations. Woodhead claims that the taste for alcohol by direct transmission never occurs. Drunkenness as a disease is not transmitted.

THERAPEUTICS.

Toxicity of Cocaine and Eucaine.

The experiments made by A. H. Peck (*Journal of the American Medical Association*, Sept. 19, 1899) on the relative toxicity of these two drugs have led him to make the following conclusions:

1. The action of cocaine is inconstant; one never knows whether

the symptoms occasioned by like quantities of the drug in animals or individuals, under like circumstances, will be similar or dissimilar.

2. The action of eucaine is constant. The symptoms occasioned by the use of like quantities in animals, under like circumstances, and so far as his experiments have gone in different individuals also, are the same.

3. The first action of cocaine on the heart is that of a depressant, and on the respiration it is that of a mild stimulant, the after-effects being, on the heart, that of a decided stimulant, and on the respiration that of a decided depressant.

4. The first action of eucaine on both the heart and respiration is that of a stimulant, the after-effects being that of a decided depressant.

5. Cocaine causes death in animals by paralyzing the muscles of the respiratory apparatus, the heart's action continuing in a feeble way for a brief period after breathing ceases.

6. Eucaine causes death in animals by paralyzing the muscles of the heart and of the respiratory apparatus, they ceasing to operate simultaneously.

7. Eucaine in toxic doses nearly always causes nausea, and occasionally vomiting.

8. Eucaine is decidedly a diuretic, causing renal discharge in a majority of instances in which a toxic dose is used.

9. Cocaine is not a diuretic to any appreciable extent, renal discharge having occurred in only one instance in connection with all the author's experiments.

10. The pupils of the eyes, in nearly all cases of cocaine poisoning, do not respond to light and are more or less bulging from their sockets.

11. The pupils of the eyes in most cases of eucaine poisoning do respond feebly to light, and rarely ever bulge from their sockets.

12. The action of toxic doses of eucaine is more like that of a paralyzing, tetanoiding, convulsion-producing agent, than it is like an anesthetizing one, the plantar and cremasteric reflexes nearly always responding.

13. Toxic doses of cocaine cause general anesthesia in connection with the other symptoms in the majority of cases.

14. True tetanus, of all striped muscles of the limbs, and Cheyne-Stokes breathing nearly always occur with the use of cocaine, but seldom does either occur when eucaine is used.

15. Cocaine is at least three times more toxic than beta eucaine, and alpha eucaine is as toxic as cocaine.

16. Boiling does not destroy the efficacy of cocaine, but it does modify it; and boiling in no degree lessens the efficacy of eucaine.

The Thyroid as an Antidotal Organ.

At the Berlin Society for Innere Medizin Dr. F. Blum (*Medical Press*, Aug. 29, 1899) recently gave his views and reported on his experiments in determining the true function of the thyroid body. Like most others he denies that it is in any way a gland, as it possesses no secreting organs. In his opinion investigators have been misled in their views, and have wrongly interpreted facts observed by them. The course of disease after removal of the thyroid has been the cause of much discussion. The disease varies very much, and oscillates principally between severe attacks and free intervals. If when an animal is passing through an active period thyroid preparations are given and a free interval follows, the belief obtains that the preparation was the cause of the free interval, whilst in reality the freedom from active evidence of disease would have taken place as a matter of course. Dr. Blum extirpated the thyroid from 100 dogs, 96 of which became diseased, whilst four remained healthy. From this it may be concluded that the thyroid body is a vital organ, but that occasionally reserve powers are retained in the body that compensate for its loss, four of the dogs remaining healthy. Of the 96 animals that became diseased not one could be kept alive by feeding with thyroid in any of its preparations.

According to these facts, therefore, the thyroid is a mere gland, but that it attacks something circulating in the system and renders it harmless. This harmful substance is a toxalbumin saturated with iodine The iodthyrine is not profound in the thyroid. Iodine was found in the thyroids of all the animals. When potassic iodide was given an increase in the organic iodine combination took place. The thyroid holds its iodine very fast, as experiments had shown. The chief purpose of the thyroid is the imprisoning of the poisonous combination; after its removal serious disturbances are set up which principally proceed from the central nervous system. For, according to Nissl, the ganglion cells show constant changes, swelling of the cells from increase of the protoplasm, and disappearance of the granules.

The Application of Caffeine in Cardiac and Renal Diseases.

Sjenetz (*Vratch*, vol. xx, No. 14; *International Medical Magazine*, August, 1899) made some very important observations on the action of caffeine. Being at first skeptical as to its harmlessness in the usual doses employed, he finally convinced himself of its decidedly poisonous nature. The three cases reported by him are very instructive. One is that of a young and healthy woman who, feeling indisposed,

began to take powders of caffeine citrate 0.3 gramme each every two hours. After taking five powders she suddenly became unconscious. Subcutaneous injections of ether, bloodletting, artificial respiration, and other means finally succeeded in reviving her. She soon felt better, and two hours later was walking about the room, but unfortunately repeated the powders, and after the tenth dose suddenly dropped dead. The heart was firmly contracted, having stopped in systole.

In the second case, a young man suffering from pneumonia received 0.2 gramme of caffeine citrate three times daily, as a heart tonic. On the third day he suddenly died. The heart was found contracted, almost obliterating the cavities.

The third case is that of a middle-aged woman, suffering from an acute exacerbation of chronic renal disease. Caffeine was administered to her for its diuretic effect. After taking it for a few days she died of heart failure. The heart was also here found very much contracted.

The author has administered this alkaloid in doses of 0.2 to 0.3 gramme two to three times daily in cases of cardiorenal affection and noticed the following results: On the day following the administration the arterial pressure markedly increased, the pulse became full but not changed in frequency, the amount of urine gradually increased, the dropsy diminishing but slightly. In five to six days the patients began to complain of tightness in the chest, shortness of breath, restlessness at night, and general aggravation of the disease. On percussion the heart was found notably smaller. As soon as these symptoms appeared the administration was discontinued, and the blood-pressure at once commenced to decline, the excretion of urine decreased, the pulse became soft, the patient feeling much better. The analysis of the urine, however, showed the presence of caffeine for many days (ten to fifteen), thus proving the cumulative action of the drug. Again, the author has noticed that the elimination of the caffeine is much slower when the kidneys are affected, and it is therefore contraindicated in renal affections.

THE TREATMENT OF SYPHILIS BY THE METHOD OF DR. PROHOROV.

N. E. Akatzov (*Vrach*, p. 515, 1899; *Journal of Cutaneous and Genito-Urinary Diseases*, September, 1899) says that Prohorov advanced the idea of administering medicines to patients in doses according to their weight. He claims that there is neither a theoretical nor practical ground for expecting to obtain the same results from preparations administered in the same dosage to patients of different weight; that

histories where such results are recorded are not exemplifications of the action of the drug, but accidents. From his and others' experiments he concluded that the same medicinal preparations taken in the same dosage often produce different actions, and that different medicinal preparations will exert the same effect, when taken in certain given quantities; and the aim of scientific medicine is to find out in what quantity a given medicine will provoke biological phenomena in the desired direction. Syphilographers often complain of the uncertain action of mercurial preparations, that they often produce poisonous effects even when administered in very small doses, and in such cases there is no use in giving higher dosages; but according to Prohorov's theory in such cases an increased dosage will have a salutary effect.

Basing his work upon this theory Taube administered to patients mercury (biniodide of mercury 3, KI 6, water 100, for hypodermic injections) according to their weight — *i.e.*, 0.003 grm. for each kilo in grown persons and 0.0015 gr. in children, every ten days. After the injections the patients lost weight for the first days, but regaining and even surpassing it later. With the increase of weight the appetite improved. Very seldom the gums showed signs of inflammation; there was not the smallest inclination to stomatitis. The only differences in patients were confined to the size of the nodules after injection and to the time of regaining their weight. In injecting other mercurial salts the author paid small attention to the individual idiosyncrasies of patients, but in administering sublimate he advises keeping the amount between 0.00025 and 0.001 for each kilo of weight. Later he prescribes 0.05 gr. of KI and 0.025 of sulphate of iron for each kilo of weight daily. The author compares the results obtained by this method with results obtained by other writers who administered mercury in the ordinary way, and his conclusions are in favor of the method of weight.

The same results were arrived at by Akatzov, who tried the method in one hundred patients suffering with syphilis.

Malta Fever Treated with Malta Fever Antitoxin.

Drs. E. D. Fitzgerald and J. H. Ewart (*The Lancet*, April 25, 1899) report that after continuous treatment with calomel and phenacetine no lasting improvement resulted.

The germ of Malta fever was not detected in the blood, but the results of treatment left no doubt of the correctness of the diagnosis Five drachms of the antitoxin was injected into the subcutaneous tissue of the abdomen, the temperature having been subnormal for

five days. The following day five drachms was again injected, the temperature being 99°. For the next few days the temperature varied between 98° and 100° F. One week after the first injection was given a severe urticaria appeared on the abdomen, in the vicinity of the site of the injections. A febrile movement continued, and on the expiration of the second week another five drachms of antitoxin was injected. The temperature rose to 104.6° F., and the patient was very ill. The urticarial rash was more pronounced; the joints were swollen and painful. There was a slight cough, and the expectoration was tinged with blood. The authors suggest an internal urticaria, causing exudation from the serous membranes involved. A few days later the patient was more comfortable; the temperature fell to normal, and he soon became convalescent. Subsequently a subnormal temperature developed, lasting for several weeks, but there was no return of other symptoms. A blood examination was made. Before the first injection of antitoxin the hemoglobin was 120, and the corpuscles 7.3. A second examination after the second injection showed hemoglobin 105 and corpuscles 6.93.

The Treatment of Prickly Heat.

Dr. Frederick Pierce, of Bombay, in the *Journal of Tropical Medicine* for June, 1899, says that those suffering from this annoying affection should have the body anointed with oil for the purpose of protecting it against irritation of the exuded sweat. It also keeps the skin soft. The preparation considered by Dr. Pierce to be the most efficient is a mixture of almond oil and lanolin in the proportion of 8 to 1. The body should be anointed with this night and morning, and gentle massage of the skin used at the same time to relieve the distressing symptoms. The skin is sometimes so excessively tender that anything like rubbing must be avoided. Temporary relief can be obtained by applications of carbolic acid, menthol, and other drugs, but lasting improvement is secured by the use of oil.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Subconjunctival Injections of Atropine.

L. Thilliez (*Journal des Sciences de Lille*, Aug. 15, 1899) strongly recommends the subconjunctival injection of atropine in cases demanding the use of this drug. He claims by this method minute

amounts produce the desired effect and cure even when all other measures have failed. Two drops of a 1:200 solution injected under the conjunctiva proved promptly effective without causing any phenomena in the other eye. This method is indicated in cases requiring prompt action, such as acute and painful iritis, ulceration, phlyctenular keratitis, etc.

Shall We Use Cold in Acute Middle-ear or Mastoid Affections?

At the annual meeting of the American Otological Society, held at New London, Conn., July 18, 1899, Dr. Tansley vigorously opposed the use of cold in all acute middle-ear or mastoid affections, as it seems to exert no curative effect whatever, and might hinder in determining when to operate. Although cold might restrain the growth of microbes under certain conditions, he could not see how sufficient cold could be satisfactorily applied in mastoid troubles; indeed, he reported a case to show that the application of cold caused great destruction of tissue, and it seemed to accomplish nothing more than to alleviate the pain and external swelling.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Epithelioma as a Sequel of Psoriasis, and the Probability of its Arsenical Origin.

In the *American Journal of the Medical Sciences* for September, 1899, M. B. Hartzell, M.D., instructor in dermatology, University of Pennsylvania, reports the following case: "In November, 1898, Miss M——, aged thirty-five years, presented the following lesions: On the outer side of the heel of the left foot was an ulcer about two inches in diameter, shallow at the edges but quite deep in the center, with a perfectly flat, infiltrated border. Close by this large ulcer, which was very painful, was a much smaller, very superficial one, which was evidently undergoing cicatrization. In addition to these ulcerative lesions the soles of both feet were the seat of a marked keratosis, which existed as diffuse patches upon the heels, and shot to pea-sized, clavus-like elevations, most numerous beneath the metatarsophalangeal articulations. The palms of both hands were also the seat of a keratosis even more marked than the soles, the palmar surface of the fingers presenting numerous shot-sized corneous elevations, while the

center of the palms were dry and thickened. Beside these keratosic lesions there were several small, superficial ulcers upon the palmar surface of the fingers, which had originated at the site of corns and were quite painful. Upon the elbows and trunk were a few patches of psoriasis, which presented nothing unusual. Upon the left breast was an irregularly oval, quarter-dollar-sized, red, somewhat thickened, slightly crusted patch, which was just beginning to ulcerate in small areas. In the left groin was a bosselated tumor the size of a small orange, firm and elastic, except upon the summit, where the skin was evidently upon the point of giving way.

"The history of the case was as follows: At fourteen years of age she began to have psoriasis of the ordinary type, from which she had never been entirely free since, and for which she had taken arsenic in considerable doses over long periods of time. Some nine or ten years after the first appearance of the psoriasis horny patches and corn-like elevations began to appear in the palms of the hands and on the soles of the feet, and at a still later period—how soon after the keratosis I was not able to learn accurately—small, superficial ulcers occurred beneath these horny masses, which obstinately refused to heal under any kind of treatment. At this time an ulcer appeared upon the left heel, near the site of the one above described, which, after being treated in vain with various local applications, was thoroughly curetted by her medical attendant and healed entirely. One year later a new one appeared, which slowly but steadily extended until the patient's death, uninfluenced in its progress by treatment. Seven months before my first visit the tumor in the groin began, and this steadily, at first slowly, but later more rapidly, grew larger, and ulcerated, forming a deep, fungating, foul ulcer, which discharged very abundantly. This was soon followed by more or less continuous fever, loss of appetite, rapid emaciation, and death about two months after my first visit.

"A microscopical examination fully established the carcinomatous character of the lesion. There were many well-defined, slender, branching tracts of epithelial cells extending well down into the collum, a considerable number of epithelial cell-nests, and a scanty infiltration of round cells. Sections of the secondary tumor in the groin, made after death, showed it to be composed of epithelial cells contained in thin-walled alveoli."

Mucor Dermatosis Resembling Scabies.

Emil Luck, of Paterson, N. J., reports a case under the above title in the *Medical Record* of August 5, 1899. The patient was a man aged fifty-three, a silk weaver by trade, and in general good health. The

affection had the appearance of scabies, the seat of it being near the parts for which the sarcoptes scabiei has a predilection, as the armpits, the skin between the fingers, and the inner side of the arms, especially near the elbows. The patient complained of terrible itching at night and when warm. Sleep at night was impossible, and from continuous scratching large sore skin abrasions had developed. Upon examination no sarcoptes scabiei could be found. There were small elevations, which were connected by a duct beneath the horny layer of the skin, as produced by the itch insect. On squeezing a liquid-like serum escaped, especially in the armpits and at the elbow-joint, which parts were completely covered with small dark-red pustules very much inflamed. Near the margin of this inflamed area several solitary spots were found. Some of them soon began to heal, and the color grew less and less intense; some spots were covered with a white scab like that of psoriasis. Here, with the aid of a magnifying glass, several filaments emerging from the pustules were seen, which when stained with silver nitrate showed the characteristic features of mucor corymbifer. The affection did not yield to chrysarobin, ichthyol, and red ointment, but disappeared after application of a three-per-cent menthol and salol ointment.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
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The Close Relation Between the Nasal and Cranial Cavities as a Cause of Brain Disease.

In the *American Medical Quarterly* for June, 1899, William C. Krauss interestingly and rationally discusses nasocranial relationship, citing their close contiguity, the fact that the cribriform plate of the ethmoid is not impervious to oxygen, and that osmosis, and thus direct aeration of the brain, is quite possible.

The evil cerebral effect of deficient nasal respiration has long been known—the defective development, inability to concentrate the attention, impaired mentality, etc.

A case in point is cited of a child, bright, active, playful, of buoyant spirits, who became suddenly changed—dull, stupid, listless, impaired in memory, almost idiotic, a mouth-breather, snoring at night, losing flesh and appetite, the expression changing to one of vacancy and dulness. The successful removal of an adenoid growth

changed the whole picture, and she developed so surprisingly mentally that judicious restraint became necessary.

The exposure of the nose is such that the various microorganisms here find ready admission, the meningococcus here doubtless making its fatal entrance. It is thought that the non-mobile diplococcus is taken thence by the leucocytes and carried through the lymph spaces to the brain and meninges.

The hygiene of the nose thus assumes a new and more serious importance, and accumulations of foreign matter should be promptly and carefully removed by appropriate cleansing agents, of which the "old Dobell's solution" has been found most satisfactory, to be followed by some bland oil.

Cerebrospinal Meningitis.

At the recent meeting of the American Medical Association (*Journal of the American Medical Association*, July 22, 1899) two interesting papers were presented by Drs. G. L. Eyster and T. N. Miller upon this subject—the former reporting two cases, one fatal and the other recovering, in both of which the presence of the Weichselbaum diplococcus intracellularis meningitidis was satisfactorily demonstrated.

Dr. Miller quotes several authorities as adverse to the theory of contagion; the discussion, however, brought out several allusions to the probability that it is in some way transmissible.

Kernig's sign, a spastic contraction of the flexor muscles of the thigh which prevents extension of the leg when the thigh is flexed at right angles with the long axis (which has been specially studied by Herrick of Chicago), seems to have been present in almost all of the cases where looked for.

Lumbar puncture is commended as a valuable diagnostic procedure. In the case of a woman seven months pregnant (cited in discussion), the fetus was already dead, the mother lived one day, and the presence of the diplococcus was demonstrated in both mother and child.

The bromides, the iodides, ergot, and opium are the remedies most mentioned in the discussion on treatment.

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ORIGINAL CONTRIBUTIONS.

MASTOID COMPLICATIONS IN ACUTE OTITIS MEDIA.*

BY SAMUEL G. DABNEY, M D.,

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I wish to consider briefly, first, mastoid periostitis, and secondly, disease of the mastoid cells, complicating acute inflammation of the middle ear.

Mastoid Periostitis.—The following case illustrates this subject:

Mr. O——, aged thirty-six, had suffered from influenza, followed by acute otitis media. After a week's treatment with the hot douche, peroxide of hydrogen, and rest in a warm room, he felt sufficiently well to resume his business. This required him to do a great deal of traveling and to suffer some exposure. A few days later, while the ear was still discharging quite freely, he began to have violent pain over the mastoid process. This continued for about forty-eight hours, when he returned home and sent for his physician. The hot douche was again used in the ear and hot poultices applied over the mastoid, but the pain was still intense. The temperature ranged at this time from 102° to 104°. Two days later I was called to see him. The temperature then was 102°. There was well marked edema and redness over the mastoid, with intense tenderness on pressure. There was a perforation in the lower anterior part of the drum membrane, from which a free discharge took place. The auricle was pushed forward.

The patient's appearance was haggard and worn from pain and loss of sleep. Four leeches were directed to be applied over the mastoid, and the use of the hot douche to the ear continued. The leeching gave great relief to pain; the patient had a good night,

*Read before the Louisville Clinical Society.

and for a day or two was much better. The symptoms then returned with increased intensity; edema, redness, and tenderness over the mastoid became more decided, and fever ranging from 102° to 103°.

The diagnosis of mastoid periostitis certainly, and perhaps of mastoid cell disease, was made. The patient was removed to the infirmary. An incision over the mastoid and down to the bone liberated about one ounce of pus. The bony surface, after careful examination, was found to be healthy. The swelling over the mastoid was so great that the cut was at least an inch in depth before the bone was reached. The upper part of the wound was closed with stitches and the lower part packed with iodoform gauze. Pain and fever immediately disappeared, to return no more. In a few weeks both ear and mastoid were entirely well.

There is nothing extraordinary in this case; I have seen many similar to it. It seems to me rather remarkable that several of the recent authors either do not mention mastoid periostitis or dismiss it in a few words. In Dr. Roosa's book, however, it is admirably described in an eight-page article. Dench says nothing about it. As to the incision over the mastoid—the so-called Wilde incision—he says that it may occasionally be useful in children, but that its value has been greatly overestimated. Knapp, in his concise and excellent article in De Schweinitz and Randall's System of Diseases of the Eye, Ear, Nose, and Throat, devotes only ten lines to mastoid periostitis and apparently refers to a milder form of the disease usually found in children. Gorham Bacon merely says that mastoid periostitis may occasionally complicate acute inflammation of the middle ear in strumous subjects.

I believe that the disease is neither uncommon nor unimportant, and that it occurs quite independently of any strumous diathesis. Many cases of red, tender, and swollen mastoids, accompanied by considerable fever and intense pain, occurring in the course of otitis media, will be relieved by leeching and the application of heat and cold. Others will be cured by a free incision down to the bone, whether pus be found or not. The incision should not be long delayed.

Inflammation of the Mastoid Cells.—This is the graver form of mastoid involvement from acute middle-ear disease. It is most common after influenza and scarlet fever. It is more likely to occur in tubercular and diabetic subjects, and both symptoms and prognosis are modified by these conditions. Physical and nervous strain during the course of an otitis media predispose to mastoid involvement. Too early return to business and exposure are common causes. Its imme-

diate cause is the invasion and activity of the pus-producing organisms into the mastoid cells. The well known symptoms are:

1. Pain over the mastoid. It is sometimes said to be "deep in the ear" and sometimes radiates to all that side of the head.

2. Tenderness, especially on firm pressure. It is most characteristic when over the mastoid antrum, but may be only at the tip.

3. Sagging of the upper posterior part of the canal wall near the drum membrane.

4. Fever, usually from 99° to 102°, sometimes absent and sometimes as high as 105°.

5. Discharge from the ear, usually continuous and profuse, only exceptionally ceasing with the onset of mastoid symptoms.

6. Redness and swelling over the mastoid. In a typical case diagnosis is easy, but often one or two and sometimes nearly all of these symptoms are lacking. The two most important are deep-seated tenderness over the mastoid and sinking in of the posterosuperior canal wall, provided the otitis media has passed its first and most acute stage; for it is to be noted that in almost every acute inflammation of the middle ear in its early stages there will be mastoid tenderness and often pain. Doubtless in such cases there is catarrhal inflammation and congestion of the membrane lining the mastoid cells.

Pain is usually present and intense, preventing sleep and exhausting the patient, and yet it may be entirely absent. When this is true, and especially when the case is in other respects atypical, the diagnosis may be obscure. The following case illustrates this:

A child five years old, in the course of an attack of measles, had a painless, purulent otitis, with profuse discharge from the ear. About a week later daily fluctuations of temperature from 99° to 104° were observed, and a swelling appeared in the neck below the mastoid. These conditions had continued for a week or more when I first saw the patient. (The case was in a town in the interior of the State.) Examination then showed a perforation in the lower anterior part of the drum membrane, from which there was a copious discharge. No pain either in or about the ear or elsewhere was complained of. No tenderness could be elicited by even firm pressure over the mastoid. But the symptoms pointed unmistakably to pus retention. In this case I was at first misled and believed the pus was to be found in the swelling in the neck below the mastoid tip; but even deep dissection there was negative. Almost the only symptom of mastoid disease was a bulging in of the posterosuperior wall of the canal. This led me to open the mastoid cells, in which an abundance of pus was found. A free opening was made, the cavity curetted, and the case went on

to complete recovery. It is noteworthy that the mother of this patient has long been in ill health and presents all the appearances of tuberculosis.

In certain cases there will be no discharge from the ear and no history of any such discharge. The appearance of the drum membrane may be only slightly reddened and the hearing not much affected. Here the infection has passed directly into the mastoid. In severe cases of this type the destruction of the mastoid cells and bony covering may take place very rapidly. The following is an illustration of this form of the disease:

Mrs. X——, aged about thirty-five, had a sharp attack of earache a few days before the birth of her child. This subsided, and no further trouble was noticed with the ear until some days after her confinement. Then began violent pain back of the ear and radiating to all that side of the head. I was called to see her after this symptom, together with redness and swelling over the mastoid, had been going on for a week. I found the hearing good and the drum membrane only slightly reddened, but the mastoid symptoms were so pronounced that I made an incision at once, though the surroundings and preparations were unsatisfactory.

An opening into the mastoid bone was found large enough to put the end of my forefinger into. The cavity was emptied as well as possible and packed with iodoform gauze. Next day the patient was removed to the infirmary and a more thorough examination made. It was found that the whole mastoid space had been converted into a single large cavity and that the caries extended well down to the tip. The cortex was removed with rongeur forceps and chisel, the cavity scraped out with curette, and cleansed with antiseptic douche and packed with iodoform gauze. Recovery was prompt and satisfactory.

In this case there had never been discharge from the ear, and pain in it and deafness, except in the outset, had been slight.

In occasional instances a case presenting the most typical evidences of mastoid cell disease will go on to recovery without operation. Although the law of gravity would seem to oppose it, we must conclude that in such cases the mastoid has drained into the middle ear. As these cases are rare exceptions, and as delay and overconservatism may cost the patients their lives, we should never hesitate to advise operation when the symptoms demand it; the more so as the danger of the operation itself is very slight.

Treatment.—Mastoid complications in acute otitis media are best prevented by keeping the patient in a warm room, with rest of both mind and body, and giving the appropriate treatment for inflammation of the middle ear. To discuss this latter point in detail would be too

great a digression, but I would suggest: (1) that powders should not be used in the beginning of the acute symptoms; (2) that here the hot antiseptic douche is most valuable; and (3) that as the acuteness of the attack subsides, either dressing with antiseptic gauze (iodoform or nosophen twisted into a little wick and pushed down to the drum membrane) or the insufflation of powders (nosophen, boracic acid with resorcin, etc.) is very useful. If despite these measures great pain and tenderness over the mastoid ensue, either with fever and edema or without, we should carefully inspect the drum membrane to see if drainage is perfect. Even when the perforation does not pout and appears to be satisfactory, I believe I have seen excellent results from a free opening in the upper posterior part of the drum membrane, sometimes prolonged a little along the canal as Dench recommends.

For the relief of pain and to abort inflammation, from three to six leeches should be applied over the mastoid, followed, if need be, by hot or cold applications. Formerly heat was most used, but of late years the ice-bag, kept on continuously for from twelve to twenty-four but not over forty-eight hours, has been most popular. I have used both, and believe that our selection of heat or cold must depend largely on the patient's comfort. Should the mastoid symptoms continue, we are to distinguish, if possible, between a periostitis and an inflammation of the mastoid cells. Sometimes it is easily done, while in other cases it is difficult. When there is persistent tenderness on pressure over the mastoid antrum, accompanied by a pushing in of the upper posterior wall of the canal, with pain in the mastoid and probably fever of low and fluctuating type, and with profuse purulent discharge from the ear, operation is imperative. In the great majority of cases of this type the mastoid cells must be opened. But it is well to remember that the group of symptoms may be far from being so perfect and typical, and yet dangerous mastoid disease be present.

The limits of this paper forbid a full description of the mastoid operation, but a few of the important points are as follows:

1. In all operations scrupulous attention must be paid to surgical cleanliness, as the unexpected may happen and some meningeal exposure be found.

2. In periosteal inflammations an incision should be made over the mastoid down to the bone and the bony surface carefully examined.

3. When the mastoid antrum is to be opened, the opening should be just behind the external meatus and just below its superior border.

4. Chisels and mallet are the best instruments for opening the mastoid, followed by curette, sharp spoon, and rongeur forceps.

5. It is best to establish drainage through the mastoid antrum into the tympanum.

6. It is of great importance to examine the process in the direction of its tip, and if need be to thoroughly open it up.

7. The upper part of the wound may be closed with a few stitches; iodoform gauze should be packed into the lower part and well into the bony cavity. The subsequent dressings and irrigation may be determined by the absence of fever and other septic symptoms.

THE IMPORTANCE OF EARLY TREATMENT IN INSANITY.

BY MOSES J. WHITE, M.D., WAUWATOSA, WIS.,
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This subject is one which frequently forms a large portion of the matter contained in the official reports of superintendents of hospitals for the insane throughout the land, as well as a prolific topic for discussion in the meetings of associations devoted to the study of insanity and allied conditions. It is one which, however, is rarely presented for the consideration of a body of general practitioners; and in view of the present tendency toward cultivation of the study of preventive medicine—prophylaxis, as much as the cure of the various ills which beset mankind—I deem it most timely to offer a few suggestions with reference to the all-important need of active treatment, and particularly sequestration, in the average case of insanity presenting constantly in the experience of the general practitioner, and to urge especially the advisability of early action in these cases.

The tendency on the part of relatives to procrastinate and to defer action looking to the commitment of a case to the hospital for the insane is so well known as to require no lengthy consideration. This course is adopted through various motives—in many through ignorance of the danger of delay; in others from prejudice toward the hospital; in others again through fear of disgrace, as they consider it a stigma or blot on the family; and again, in other cases, I fear through the misdirected advice of the attending physician.

The records of the average insane hospital will fully substantiate the fact of dilatory action in the matter of commitment, in the table of duration of disease before admission, and it is assuredly a sad commentary on the lack of wisdom displayed by those interested, or who ought to be, in the future welfare of the afflicted subject.

Insanity is a purely physical disease, and as such amenable, in its incipiency, in many cases at least, to remedies calculated to correct the disorder. Aside from cases of gross brain disease, general paresis,

epileptic insanity, and brain syphilis, it is, at the outset, essentially a disorder of function on the part of the brain, and in a large number of cases readily responsive to treatment; even the exceptional forms of disease noted are susceptible of improvement by instituting suitable treatment at an early stage. The somatic theory as a basis of insanity is sufficiently well established to require no extended argument; such being the case the treatment of various derangements of the purely physical system, and that at an early period, is of prime importance. The longer they are disregarded, and the longer treatment looking to a correction of these difficulties is deferred, the more certain is the advent of chronic insanity and dementia, the goal of practically all chronic forms of mental disease.

The analogy between conditions existing in the purely physical system and those occurring in the psychical domain is too close and manifold to necessitate lengthy consideration; the effects of treatment long delayed in the case of joint injury is obvious, viz., ankylosis; in like manner treatment for a disordered brain, long deferred, inevitably results in changes producing a permanent crippling of the mental faculties.

It used to be argued that insanity was, in the majority of cases, due to either of two conditions, viz., excessive or reduced blood-supply to the brain. Later we came to regard the matter of the quality of the circulating fluid as a factor in its production. I think there is a measure of truth in the observation of the pioneer alienists. The conditions producing insanity in the average cases are largely those of anemia or hyperemia, purely circulatory disturbances, and as such capable to a great degree of being regulated and corrected. Likewise the quality of the blood, the proportion of red corpuscles, ought to be considered, and remedies tending to increase them employed. Such being the case, or assumed to be, the importance of instituting measures tending to the correction of these irregularities, quantitative and qualitative, will suggest itself most forcibly to us all.

The pathological changes presenting in a case of insanity, as seen by post-mortem examination, are too conclusive, as to the conditions existing primarily, to leave any doubt as to the efficacy of treatment early instituted.

In the case of mania we discover all the signs of overaction, viz., thickening of the dura mater and pia mater; a milky tint of the arachnoid, and even an increase in thickness of the calvarium; hypertrophy of the neuroglia, choking of the lymph-spaces, and every indication pointing to the existence of excessive blood-supply to the convolutions.

The motor excitation, mental exaltation, rapid flow of ideas,

flushed appearance of the face, throbbing carotids, morbidly animated facial expression, brilliant eye, and many other symptoms, all tend to the establishment of the belief in the existence of a disordered cerebral circulation of a hyperemic nature.

The opposite condition — viz., melancholia — presents symptoms pointing to a condition of partial starvation of the brain tissue; the pallid appearance generally, absence of facial animation, lack-luster eye, slow mental energizing, feeble pulse, depressed temperature, painful hallucinations and delusions, all mark the lack of nourishment to the cerebral convolutions, and the condition long continued inevitably results in a state of mental apathy and torpor, the precursor of secondary or terminal dementia so certain to supervene.

This latter condition is accompanied by, and is undoubtedly the result of, cerebral atrophy, and when it occurs all hope of complete and permanent recovery is lost; the most to be expected is the occurrence of partial recovery, in which state the patient is a mentally maimed individual and remains such during the period of his natural existence.

As stated before, the morbid changes in the brain, found on post-mortem examination, pointing to the existence of these states described, viz., hyperemia and resulting hypertrophy succeeded by ultimate shrinkage or atrophy, and the conditions of cerebral anemia and resultant atrophy, are so plainly presented to view as to impress one most strongly with the necessity of instituting early and active measures tending to a correction of the existing disorder.

The wisdom of early treatment, and particularly of sequestration, in the average case of mental disease will not, I think, be questioned when the preceding considerations are held clearly in view.

The many difficulties which attend the treatment in the home of the patient—the active resistance, open defiance, refusal of food and medicine, disinclination to take fresh air and exercise, inability to obtain sleep in proper amount, and many other difficulties to be contended against — render it practically impossible to accomplish anything in the line of treatment directed to a cure. Valuable time is being wasted, and to the end of rendering the case an addition to the already large army of the chronic insane.

Among the wealthy classes and in carefully selected cases home treatment may be admissible, but even then comparatively few respond to treatment under such conditions.

In the very nature of the disease the first symptom, and the most prominent, is the perversion of the ego; the natural self is alienated, and as a result all the feelings and affections natural to the individual are distorted; the sufferer regards with aversion those nearest to him,

and his antipathy toward them eventuates in negativing any results attempted in the way of treatment.

A removal from home and familiar surroundings is the first indication in the treatment, and the beneficent results of such removal are too apparent to those engaged in this line of practice to leave any doubt as to its efficacy.

The theory of autoinfection as an aggravating cause of the perpetuation of the disease has been thoroughly discussed by alienists, and the lessons of experience along these lines have been so convincing as to make it our prime effort to overcome this element of causation as soon as possible.

It is characteristic of the average acute case to present a condition of habitual constipation, and it is one which is exceedingly difficult of correction, by reason of the aversion of the subject to take remedies directed to the condition. This condition is essentially one of atony of the intestinal tract, and to such a degree that it requires a lengthy course of treatment to correct it. The patient does not respond to the usual remedies, and for a time the only recourse is enemata, both high up and the ordinary rectal enema, together with the occasional washing out of the stomach.

My experience in the employment of the high injection confirms the truth of the theory perfectly. While the patient will have a daily movement of the bowels, and is seemingly regular in that function, the actual condition encountered is one of obstinate constipation which only a persistent course of tonics, such as strychnine, will overcome. This fecal matter is reabsorbed to a greater or less extent, and chemical changes ensue which result in poisoning the brain and nervous system.

The state of affairs is one which is extremely apt to be overlooked by those not thoroughly familiar with this class of patients, and to the serious detriment of the case. We have frequently had patients brought to the hospital said to be suffering from diarrhea; likewise from retention of urine. The fact proved to be that the patient was suffering from a discharge occasioned by an overloaded colon or an overdistended bladder. This is a matter of grave importance in the treatment of a case of insanity, and one which is exceedingly apt to be overlooked by the general practitioner relying largely upon the statements of friends, who, as a rule, are not qualified in any sense to judge of the actual conditions existing.

Again, the necessity of administering to patients of the acute type, under home treatment, enormous quantities of sedative and soporific remedies constitutes a most serious objection to outside care.

It is in my own experience not a rare occurrence to receive a case

the symptoms of which are completely masked by the narcotic administered just prior to his admission. It is necessary to allow the drug to become eliminated from the system before a diagnosis can be intelligently made.

In a paper recently presented by P. M. Wise, president of the Commission in Lunacy in New York State on the subject of "The Treatment of Insanity, Past, Present, and Prospective," the Doctor says, speaking of home treatment for the sufferers from insanity: "The manifestations that call the physician are symptomatic only. Sedation and narcotism is the subduing of fire with oil mixed in the water." Further: "The preservation of household quiet has been the death-knell of many a victim, not by intent but by misdirection, and for this reason, almost wholly, is early removal to special facilities for the treatment of the insane desirable."

To give an adequate idea of the prevailing modes of treatment of the insane in the modern hospitals set apart for them, I cannot do better than to quote further from the paper of Dr. Wise. He says: "The present methods of the treatment of insanity in hospitals are founded upon the removal of active causes—toxins, either auto, artificial, or objective—irritations of the nervous mechanism from all causes, the improvement of the general health, and the development of all bodily structures to a normal condition of resistance. No means are discouraged, in fact no means are withheld, that will attain this result."

The results attained in the treatment of the insane in hospitals are sometimes adverted to reproachfully on the part of the general practitioner. It is asserted that the statistics of recoveries are misleading; that the same case is made the subject for several recovery discharges annually; and that on the whole few, if any at all, constitute complete and permanent recoveries.

There might seem to be some basis in fact for these assertions as applied to asylums for the insane of former times; I am, however, strongly inclined to question the justice of applying them to the average modern hospital for the insane. The rules of the association, composed of medical superintendents throughout the land, enjoin the discharge, as recovered, of the same patient twice during the same year.

Next, as to the discharge of patients as fully recovered who by reason of a relapse subsequently might furnish ground for this assertion, it is the practice of authorities of hospitals for the insane to discharge, as recovered, any case not known to be the subject of periodic or recurrent insanity, as soon as he fails to present any delusions, hallucinations, or any symptoms of insanity, or rather after

he has failed to present these symptoms for a reasonable period of time. It is assumed that the sufferer is in a state of normal mentality, no matter of what grade, high or low, and the alienist is not yet possessed of an infallibility of judgment and foresight which will enable him to predict the recurrence or relapse which we admit frequently occurs in cases sent out as recovered. He can, however, safely predict to himself, and he does to the patient on his discharge, for his possible benefit, the return of the malady when he goes back to the old surroundings which gave rise to the attack, and lapses into careless or vicious habits of living, which were primarily productive in causing his disorder.

The statistics of recoveries in hospitals for the insane in this and foreign countries serve to emphasize the importance of early treatment more than any argument, however lengthy, which can be advanced. These statistics serve to show that of new admissions received within three months of the onset of the disease, 75 per cent recover; within six months, 50 per cent; within one year, 25 per cent; and after one year's duration, 10 per cent. These statistics are based upon reports of asylums throughout the world, carefully collected and prepared by men thoroughly versed in such matters, and whose ability in this line is unquestioned.

This brief paper may be most properly concluded by expressing the hope that the efforts made in the direction of promoting the clinical study of insanity in medical schools in recent years may be productive of much future benefit by inculcating in the embryo practitioner the grave importance of advising early removal to the environments of the hospital of cases which may come under his observation.

SURGICAL TREATMENT OF INTERNAL HEMORRHOIDS.*

BY WM. F. METCALF, M.D., DETROIT.

The proper surgical treatment of internal hemorrhoids is followed by as great satisfaction as attends any surgical procedure. The effect upon nutrition is usually marked. The permanence of cure depends upon the removal of the cause. If there be permanent obstruction to the rectal circulation they will return. Urethral strictures should be relieved, and abnormal conditions of the generative organs and of the sigmoid, and in fact of the whole digestive tract, corrected to insure a satisfactory result. The habits of living may have to be changed—more attention being paid to temperance in eating and drinking.

Hemorrhoids are frequently overlooked as an etiologic factor in disease, and unnecessarily painful methods of treatment are still advo-

*Read before the Detroit Medical and Library Association.

cated by some authors. For consideration of the various methods more or less popular at the present time I refer you to Allingham, Mathews, Ball, Gant, and others.

Of the method by ligature Mathews says: "Scarcely has there ever been such a consensus of opinion among noted surgeons in regard to the surgical treatment of any disease as of internal hemorrhoids—Gross, Ericksen, Van Buren, Allingham, Sr. and Jr., Ball, Wyeth, Straus, Bull, Copeland, Bush, Cook, Sir Benj. Brodie, Syme, Cushing, Quain, Ashton, Gowlland, Cooper, Goodsall, Gerster, Bodenhamer, and a host of other authorities agreeing that the ligature is the simplest and most radical cure for internal hemorrhoids." Ligature *en masse* is meant. In this connection Mathews says: "It is important to use two sizes of thread—a small size for the smaller tumors and a larger size for the large tumors." Further, he says: "I think a stout linen thread quite as good as silk, but it must be understood that it must be so stout that it will not break with the hardest pulling. Much confusion arises, especially after transfixing a tumor, from having the thread break. It is best also to have it well waxed, for the reason that it adds somewhat to its strength, but mainly because it makes the knot more secure." I will not quote further, as you are doubtless all familiar with the method. He raises the question as to how much of the pile should be cut off above the ligature, with reference to which he says: "I think the advice usually given by authors is a little too careful, for this reason: if we only clip off a little portion of the tumor we leave the major portion or portions to be pushed back into the bowel, consequently that much more tissue is left to slough." It appears from this that he thinks sloughing objectionable. Further, he says: "I am in the habit of cutting off two-thirds." Thus one-third of the tumor above the ligature is replaced to slough. In this connection Ball, of Dublin, says in substance: "Ligatures, or sloughs following crushing and the use of the cautery, come away about the end of the first week. There remain, however, ulcerated surfaces which require about another week to heal. During this period it is better for the patient to remain in bed, because the rectal veins have no valves, which condition may prevent healing."

Sloughing in any wound is to be deplored. An important surgical principle is to avoid as much as possible the strangulation of tissue; especially is this important in reference to the rectal membrane. I have often observed cessation of respiration when forceps were put upon a section of this membrane, to be resumed upon their removal.

Internal piles are tumors formed by dilated vein extremities embedded in exudate, the result of congestion, and lying wholly or in part above the external sphincter. This exudate often becomes

fibrous. The arterial supply of these tumors is from above, the vessels running parallel with the gut. The tendency of these arteries when cut is to retract within the loose tissue above the tumor. The vein extremities can be cut without danger of hemorrhage. I am now speaking of uncomplicated internal hemorrhoids, which I believe always arise between sphincters. In some cases they may extend above the internal sphincter, in dealing with which the danger of hemorrhage is greater and ligation of arteries is occasionally necessary.

Allingham describes his method of excision as follows: "In performing excision I first gently but fully dilate the sphincter muscles, and employ a retractor to keep the anus well open. I then seize the pile deeply by its base, cut it off below the level of the vulsellum, and do not let it go until all the bleeding is arrested by torsion of the arteries. Rarely more than two vessels spout and require twisting. I wait for a little while to see that all bleeding has ceased, and then I treat the other piles in the same manner." Mathews says of this method: "I think that those who have done much operating around the rectum will bear me out in saying that in but few hands could this operation be regarded as a safe one, and therefore can never become popular." I do not agree with Dr. Mathews's prediction, and would add to Dr. Allingham's description that in many cases torsion of the arteries is not required.

For about six years I have been treating uncomplicated internal hemorrhoids in the following manner (my statements are based upon more than three hundred operations): Two days before operation a physic should be given—compound cathartic pills, or calomel followed by saline. A gentle physic should also be given the day preceding operation, a high enema the night before, and an ordinary enema the morning of operation. The patient is fully anesthetized and placed in the dorsal position, the legs being held by a Clover crutch. I prefer the dorsal position because in the majority of cases genito-urinary work is required, and should ordinarily be done before the rectum is touched. I prefer to clip off the hair with the scissors. If the parts are shaved great discomfort attends the outgrowing at a certain stage. The most satisfactory speculum that I have found is known as the Pratt bivalve. It is made in two forms, one of which can be easily passed up into the sigmoid. After adjusting the speculum so that a pile tumor presents between the separated blades, I take hold of the margin of the mucous membrane below the tumor, and with the sharp-pointed scissors curved upon the flat I strip off the membrane covering the vein extremities, which often present the appearance of grapes and should be clipped out with the scissors. If there be but a small quantity of fibrous tissue, this is all that is necessary; the tumor will have disappeared. If there be much fibrous

tissue, I cut it off smoothly from the surface of the muscle. If a spurting vessel presents, I pick it up with a pair of artery forceps, and proceed to deal in the same manner with the next tumor. When I have thus passed around the whole circumference I remove the artery forceps. I then dilate the sphincters gently but thoroughly and examine for bleeding points, which if found are again picked up with a fine-pointed artery forceps and ligated with fine catgut. This ligation is seldom necessary, as the artery, freed from the fibrous tissue, retracts, and its intima being wounded by the forceps, its lumen is closed. I then clip off the tags of redundant skin about the anus and insert a plug of iodoform gauze, or one of wool covered with China silk and dusted with iodoform or aristol. This plug lessens capillary hemorrhage, and should be removed as soon as the patient complains of pain. Its removal clears away any small clots which may have formed. Sterile gauze wrung out of water as hot as can be borne is at once pressed firmly against the anus. This is repeated by the nurse every few minutes until the patient is comfortable, when a larger compress can be secured firmly by a T-bandage. This gentle but firm pressure lessens the tendency to spasm.

If the patient be a woman morphine is seldom required—in fact, many will never know that the rectum has been operated upon when it is done in connection with operations upon the genital organs. In men there is usually a greater tendency to spasm of the sphincter muscles, and an anodyne often has to be given.

It will be seen that this method leaves strips of mucous membrane longitudinal to the gut and attached to the skin margin and to the membrane above. This makes subsequent stricture impossible, and from these strips of membrane new will develop to cover the entire circumference in about a week. After the first day, comfort and cleanliness are insured by letting a stream of a saturated solution of boracic acid play upon the parts, the patient being placed upon the side upon a rubber pad and instructed to strain down slightly. Water need not be thrown within the sphincters. In fact, I think it better not to pass anything into the rectum until healing is well-nigh complete, unless colic is troublesome, which may and should be relieved by the passage of a sterilized rectal tube. The wounded surfaces usually induce constipation until a stool is forced, which should be done about the fifth day. When this is desired I order three ounces of carbolized sweet oil thrown into the rectum, a Seidlitz powder or citrate of magnesia being given at the same time. Two hours later an enema of a saturated solution of boracic acid will usually clear out the bowel without pain. After healing is completed occasionally there will be found at the anal margin one, two, or three irritable tags, which should be removed with the scissors after the injection of a solution of cocaine.

I have gone thus carefully into the details since upon the observance of these, in great measure, the comfort of a patient depends.

In his work upon the rectum Ball, of Dublin, asks why it is that when a few small piles are removed from an intensely congested rectum the spongy mucous membrane often becomes normal. He thinks it may be due to the formation of cicatrix, and refers to the formation of cicatrix in iridectomy lessening the intra-ocular tension in glaucoma. I do not believe this to be the explanation, since I have seen many cases where the spongy mucous membrane has become normal without the formation of cicatrix. I think cicatrices objectionable in this locality. The change may be due to the removal of obstructions to the local circulation and to the improvement in the general circulation which commonly follows dilatation of rectal sphincters.

In certain cases the whole circumference of the rectum is diseased and prolapses. In these cases I think amputation of the redundant membrane advisable. The success of this operation, more perhaps than of any other, depends upon careful attention to detail. The first step is a thorough dilatation of the sphincters. The diseased membrane is then pulled down around the whole circumference and held with T-forceps, six pairs being required. With one finger upon the external sphincter to guide the point of the scissors, which is entered above the grasp of the forceps, the entire circumference is amputated. The arteries in the membrane above are caught with hemostatic forceps as they are cut. The pile tumors cling to the membrane removed. The external sphincter is now wholly and clearly exposed, and if there be any break in its fibers, it can be restored by bringing the ends together with a fine catgut suture. We now have the diseased membrane, to the upper edge of which the T-forceps are attached, hanging outside the anus and attached to the skin. It should now be separated carefully from the skin margin. If too much encroachment be made upon the skin a mucus-producing surface will always remain outside the sphincter. If too little is removed the skin margin may be drawn within the grasp of the external sphincter. The membrane which has retracted upwards is now pulled down, its longitudinal fibers cut near its margin, and the circular fibers or internal sphincter pushed upward. Any hemostatic forceps remaining are now to be removed and the membrane stitched to the margin of the skin. For this I use catgut, and do not pierce the epidermal layer, that there may be less tenesmus and discomfort. I usually fortify each quadrant by an independent suture. Aseptic dressing is then applied, and one-quarter grain of morphine administered. After twenty-four hours the wash should be begun and used two or three times a day, as after the other operation above described. It promotes comfort. About a week subsequent to operation any projections around the anal margin may be smoothed

off with the scissors after the injection of a four-per-cent solution of cocaine. Two or three times, at intervals of about a month, the sphincters may need to be dilated.

I have found it necessary to do this operation only about fifteen times in three hundred cases. The result in every case so far as I know has been satisfactory, except in one case, in which there is not as good control of the gas as might be wished. I have not had an opportunity to see her since she left the hospital, but wrote her that the defect could be easily remedied. She has not yet, however, thought it of enough importance to return for its correction. Its cause is probably either a small cicatrix at one point of the skin margin preventing uniform action of the external sphincter, or a break in some of the fibers of the external sphincter at the posterior commissure, which I did not think of sufficient importance at the time to repair. This is really Whitehead's operation slightly modified, which Mathews condemns in the strongest terms. The so-called American operation, as I understand it, differs from this only in that it is done regardless of whether there be redundant tissue or not.

I will describe in Mathews's own words the operation which he substitutes. He says: "When I see a case of simple prolapse of the bowel and am satisfied that no peritoneum is included, my rule is to do as follows: I have the patient's bowels freely moved the evening before, and on the morning of operation I have an enema of hot water given. I then direct that during the passage of the water the patient is to strain down violently, which will bring down the prolapse, and in this condition he is to lie upon the table. In the majority of these cases the operation can be done without an anesthetic, and I prefer to do so for the reason that the sphincter muscle will aid me materially in restraining the prolapse and preventing its passing back into the bowel, where under the anesthetic the bowel slips back with easy effort. Having shaved the parts and washed them thoroughly with bichloride solution 1 to 3000, with my pile clamp I catch up a section of the gut, transfix it with the needle, and tie tightly upon each side. I then cut off the mucous membrane close to the ligature. This is repeated several times, going around the circumference of the gut if necessary. I then dust the exposed part with iodoform and gently push it back into the rectum, and then placing a pad over the anus and applying a T-bandage the operation is complete." I have never done this operation, and I may not understand his language, but I wish to ask which one of you would submit to it without an anesthetic? Also why, when the membrane is thus severed around its whole circumference, it does not retract, leaving a band of denuded surface at the skin margin for the formation of cicatrix? I think the operation which he condemns preferable.

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THE MEDICAL AGE.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE RIGHT TO DIE.

The autumnal conventions have been manufacturing sophistry with indefatigable industry. The supply must almost have kept pace with the demand. Had it not been that we are in the midst of the silly season, when any inanity which differs slightly from conventional types is apt to attract attention, the views recently expressed by Judge Baldwin, of New Haven, about the "right to die," would probably have fallen flat. As it is, his suggestion that the administration of a happy despatch in incurable cases of disease should be given public sanction and approbation has met with wide-spread comment.

The distinguished jurist's position is not a new one. There are, he maintains, certain maladies which lead to a protracted state of suffering incompatible with the enjoyment of life or of useful activity, and from which there can be no reasonable hope of ultimate recovery. Were those so affected to be left to the operation of natural law, they would perish. Man with his skill interrupts the operation of natural law and prolongs an existence vitiated by certain irremediable evils. This is wrong. He should at least allow nature to do her work. In the opinion of partisans who have accepted these views he should go further. He should extinguish the flickering flame. In other words, he should promote an effective euthanasia. The duty of doing this is to be assigned, not to a body of public executioners, but to the medical profession, the members of which, after acting for the public as unpaid sanitarians and statisticians, will, it is thought, assume without violent repudiation this new and disagreeable duty.

Life being something which, apart from its possessor, has no exist-

ence, its surrender is purely an affair of the individual. It is only a spurious sentimentalism which seeks to mitigate evils with death—evils which those who suffer them actually find endurable. Suicide, which is the individual's own remedy for these evils, is seldom resorted to, notwithstanding that the means of self-destruction are practically universally accessible. The instinct of self-preservation is so deeply rooted that if self-murder is not an ample means of escape from irremediable ills, surely the aid of official murderers need not be invoked. It is, after all, only a morbid development of the sentiment of pity that prompts such surrender to the enemy. Man has achieved his proud position in the universe by his ability to suffer, and if he have a heart he can stand suffering even the pangs of Tophet. The "shuffling off this mortal coil" is a matter of individual conscience; it cannot be left to the discretion of others. The pagans saw fit to discharge their souls into another world on small excuse, but the brave man will feel that he is compelled to "stand 'neath starless skies and wait the appointed hour."

Why this hankering desire to eliminate the unfit? Have the unfit no rights? Has not the heroic work of the world been done in caring for the afflicted? Why are the insane and the cancerous and the tuberculous to be done away with because nature may ordain in the long run that they cannot survive? Life belongs to its possessor. The inward life may be rich beyond all thought of outward conditions. The highest types of spiritual excellence are found among those whom nature has maimed. The insane are often the happiest of mortals. Their asylums ring with laughter. It might relieve the family of an unpleasant burden to kill the idiot, but after all idiocy passes into stupidity by imperceptible gradations of vacuousness, and a confusion of issues might imperil the lives of many who at least serve as useful examples in negative directions. Shall we kill our grandmothers because they do not come up to our notions of the *cui bono?*

That the medical profession have been practically unanimous in their repudiation of the views founded upon Judge Baldwin's statements was a foregone conclusion. The physician has no jurisdiction in the shortening of life. The true physician relieves pains by opiates for no other reason than that this prolongs life. Anodynes are not to shorten life, but to make acute suffering endurable. As for Dr. Nickerson, who, if he be correctly reported, confesses that he occasionally takes the issues of his patient's life or death in his own hands, his case can be best commended to the attention of the public prosecutor of his district. Suicide may be an individual right, but the right to kill can never escape the curse of Cain.

EDITORIAL NOTES.

An Original Tapeworm Treatment.

A writer in *Medicine* certainly treats tapeworm in an original way, and promotes its death by methods the mercifulness of which would excite the admiration of a pious Brahmin. After the administration of a tænicide, a large portion of the worm often protrudes, the head reattaching itself lower down in the intestine. Dr. J. W. Kime, the originator of this new method, in the event of this occurring, ties a string around the protruding portion of the worm and injects above the ligature half a grain of morphine. This is absorbed by the vessels of the worm. The lower part of the worm is then severed, and in ten minutes' time an injection of water is given. The upper portion then comes away apparently dead. This is certainly a new departure in medical art, and should be generally tried with a view of determining its true value.

To Kill the Mosquito.

The finding of the malarial parasite in the Anopheles of the Gold Coast will again direct attention to the necessity of waging warfare against the mosquito. Two Italian observers have recently been engaged in experimenting upon larvicidal substances, with a view of deciding the best means of preventing the development of the mosquito. The substances which gave the best results are potassium permanganate, the leaves of strong tobacco, and some of the amylene dyes. Petroleum oil seems to be the most feasible remedy by reason of its price. There is field for investigation open here to every country practitioner. The material is abundant and the field is large. No expensive outfit is required and the investigator can make his home his laboratory. The discoverer of a sure method of destroying mosquitoes will earn the gratitude of the world.

ITEMS AND NOTES.

THE health of the pope is attracting attention at Rome.

ANTHRAX has appeared in some cows near Philadelphia.

AUGUSTA, Maine, is suffering from an epidemic of diphtheria.

TYPHOID FEVER is reported to be unusually prevalent in Paris this autumn.

A CABLEGRAM states that Kitasato has discovered the organism of dysentery.

DR. WIDAL, of Paris, has been elected a chevalier in the "Legion d'honneur."

AN automobile ambulance is to be presented to St. Vincent's Hospital, New York City.

THE Board of Health of Nanticoke, Pa., is much exercised over a case of suspected leprosy.

PROFESSOR ARONS has been offered a chair of physics left vacant by Roentgen's departure.

THE next congress of French physicians will be held in 1901; the place of meeting is Toulouse.

A MARBLE bust of Emil Dubois-Raymond has been placed in the Physiological Institute of Berlin.

SOME man has sued the Pullman Car Company for consumption, said to have been contracted in a sleeping-car.

PROFESSORS FROSCH AND KOSSEL, of Berlin, have been sent by the German Government to study the plague at Oporto.

COURSES of instruction in cooking for medical practitioners have been established in two schools of cookery in Berlin.

MCGILL UNIVERSITY, at Toronto, is to have a new building for hygiene, pharmacology, and medical jurisprudence.

THE Denver College of Medicine is now the corporate name of the reorganized medical department of the University of Denver.

ALEXANDRIA has been declared free from the plague, the last of the patients having been discharged from the hospital on September 7.

THE Tenth Congress of Italian Alienists will be held in Naples from October 10 to 14 under the presidency of Professor Tamburini.

THE Mexican Academy of Medicine has offered a prize of $500 for the best work on either exploratory laparotomy or tuberculosis, or both.

TYPHOID FEVER is reported as particularly prevalent in Kentucky towns this fall, especially in those along the Ohio and Kentucky rivers.

AMONG the innumerable international congresses to be held in Paris in 1900, the most curious and quiet will be the congress of deaf mutes.

DR. WM. H. BAKER, of Lynn, Mass., was elected surgeon-general of the G. A. R. at its annual encampment, which has just closed in Philadelphia.

BY the will of the late Judge Richard Prendergast, Chicago, a rest-cure home will be founded for the benefit of persons suffering from nervous disorders.

PROFESSOR KOCH, of Berlin, has temporarily interrupted his studies of malaria in Italy, and has gone to the lowlands of India to investigate the subject there.

FOUR volumes of the report of the Moscow International Congress are about completed, and the remaining three are expected to be ready by the first of the year.

THE autumn maneuvers of the French army have been omitted this year on account of a serious epidemic of foot and mouth disease prevailing in the regions selected.

YELLOW FEVER has appeared in New Orleans, Mississippi City, Jackson, Miss., Port Tampa, and Key West, and a strict quarantine is being maintained against infected places.

THE plague at Oporto continues, there being one or two deaths daily attributed to that disease. It is believed to have been caused by a cargo of rice received from Bombay July 22.

THE Parisian authorities are being importuned to place private automobiles under more severe restrictions owing to the number of deaths and severe accidents suffered by pedestrians.

A SINGULAR case of death is reported from Washington, D. C. A parrot of mischief-making proclivities removed the lava tip from

a gas-burner, and as a result caused the asphyxiation of a young woman of twenty-three years.

A Paris exchange mentions that "Breemount's Pride," one of the horses entered in the Auteuil races, has been wearing a tracheotomy tube for some time, and that this horse won a prize of $8000 soon after the tube had been in service.

The Woman's Sanitary League of Pennsylvania has been organized at Philadelphia, with the objects of advancing sanitary science, promoting public health and good government, and forming country and local auxiliaries to extend the beneficent work.

Dr. Sheard, health officer of Toronto, in a report recently gotten out by himself, says that during the past year in the Blood Indian Reserve of the Canadian Northwest Territories twenty-three per cent of the total death-rate was due to pulmonary consumption.

According to the *Medical Record*, a young man in Brooklyn a few days ago became engaged in an altercation with a passenger in a street-car and was struck by him with a cane. The man acted strangely, and the police called for an ambulance. The surgeon who came with it diagnosed the case as one of plain drunk, and the man was accordingly arrested and fined $5 in the police court. The following day he died. An autopsy showed the existence of a fracture of the skull.

Cherrapunji, in Assam, northeast of Calcutta, has the reputation of being the wettest place on the earth, the average annual rainfall being 498.15 inches, while it has the record of one month in which 147.17 inches fell. This year it seems bound to beat all previous records, 267.84 inches of rain having fallen between January and the middle of June, five months and a half, while 73.79 inches, over six feet of water, fell in a single week.—*Scientific American Supplement.*

The trustees of the University of Pennsylvania have appointed Dr. James Tyson to the professorship of the theory and practice of medicine, the position so long and honorably filled by the late Dr. William Pepper. Dr. John H. Musser and Dr. Alfred Stengel have been made professors of clinical medicine in the same school. All these gentlemen have been distinguished teachers in the university for many years, and all are well known to the medical profession as authors of standard text-books.

Overcrowding in London.—According to a tabulated statement, there are in the parish of St. Mary's, Newington, London, 4057 tenements with one room, 7670 with two rooms, 1752 with three rooms,

and 331 with four rooms, which are overcrowded; altogether 13,810 tenements out of a total of 49,393. These are estimated to contain 15,150 overcrowded persons in tenements of one room, 40,184 in those of two rooms, 13,742 in those of three rooms, and 3580 in those of four rooms, or altogether 72,656 people.—*Sanitary Record.*

It is related of Charcot, the distinguished alienist, late of the Salpêtrière, Paris, that he had marked artistic ability, and when he was seventeen years old his family had some hesitation whether to make him a doctor or a painter. He chose the medical profession. He was fond of drawing sketches of his patients, and of landscapes he saw in his travels, and was not above making an occasional caricature. Several albums are filled with designs of this kind. A study of his work as an artist was prepared by Dr. Henri Meige in connection with the erection of his monument, and is deposited in the Salpêtrière.

According to the *Journal of the American Medical Association*, the theory that bacteria are indispensable to digestion has been laid to rest at last by Levin's research in the Arctic regions, reported in Hygiea, No. 2. He accompanied the Nathorst expedition and examined the intestines of various birds and animals killed. With the exception of one polar bear and two walruses, the intestines were found absolutely sterile, and in these only a few specimens of the bacillus coli were discovered. Bacteria were found in the water, one colony to one cubic centimeter, the number increasing with the distance from the surface. The air was found absolutely sterile. No colds nor catarrhs ever occurred among the men.

Hauviller states in his thesis on the reason of suicides, says the *Journal of the American Medical Association*, that material causes only indirectly produce the loss of psychic balance, which is the direct cause. Rich or poor, the first step is a sense of loneliness, of isolation, and association of any kind is the most effective means of combating the tendency. Family, religion, social associations, all prevent the idea of self-destruction, and the stronger the ties the less it occurs. There are fewer suicides among the Jews than among the Roman Catholics, and fewer among them than in Protestants. In the army there are more among the petty officers than among the privates. Political crises lower the number of suicides, as men are drawn into closer fellowship with each other.

The leper patient, says the *Journal of the American Medical Association*, whose death we recorded a short time ago, had been an inmate of the Johns Hopkins Hospital since April, 1897. She had lived in Allegheny City, Pa., and was supposed to have "scrofula" of six years'

standing. Her disease was recognized as leprosy on her arrival in Baltimore. The Pennsylvania authorities refused to allow her to return, therefore the hospital was obliged to keep her. With regard to the origin of the disease, it was ascertained that when she was fifteen years of age she went to Demerara, British Guiana, and remained there several years. It is supposed she contracted the disease there. The case at one time created much apprehension in the hospital, but as the patient was rigidly isolated, no fear is entertained that any other person has been infected.

A CHINAMAN died a short time ago, says the *Philadelphia Medical Journal*, in an isolated hut on Blackwells Island, in which he had been secluded for the last two years for leprosy. In October, 1897, three lepers were identified in New York and sent to North Brother Island. Two of them were successful in stealing a rowboat and made their escape. After being some time at large they were found together and sent to Bellevue. From the hospital they were removed to Blackwells Island and established in a hut remote from all other denizens of the island, where they looked after one another. The cause of death in this case was certified as heart disease. The surviving leper still occupies the hut. It is believed that there are several lepers, Asiatic and Scandinavian, concealed from the health authorities in the care of friends, but the disease is rare for a seaport as large as this, where the waifs of foreign commerce are likely to manifest all sorts of exotic maladies.

ACCORDING to the *Dietetic and Hygienic Gazette*, an English writer, while investigating the history of tea, came across a rare manuscript in the British Museum, giving a quaint summary of the virtues of the herb called tea or chee. It was dated October 20, 1686, and purported to be a translation from the Chinese, as follows: "(1) It purifies the Blood that which is Grosse and Heavy; (2) It vanquiseth heavy Dreams; (3) It easeth the Brain of heavy Damps; (4) Easeth and Cureth giddiness and pains in the heade; (5) Prevents the Dropsie; (6) Drieth moist humours in the Heade; (7) Consumes Rawnesse; (8) Opens Obstructions; (9) Clears the Sight; (10) Cleanseth and Purifieth humours and hot Liver; (11) Purifieth defects of the bladder and Kidneys; (12) Vanquishes superfluous Sleep; (13) Drives away dizziness, makes one nimble and Valiant; (14) Encourages the Heart and drives away Feare; (15) Drives away paines of the Collick; (16) Strengthens the inward parts and quickens the understanding; (17) Strengthens the Memory; (18) Sharpens the will and quickens the understanding; (19) Purges safely the Gaul; (20) Strengthens the use of due benevolence."

Bacteriologists devote themselves to the detection, isolation, and destruction of bacteria, and, strange to say, they do not appear to have given much attention to the danger that lurks in the ordinary articles of household use. For example, the common house-broom is both the habitation and breeding-place for whole colonies of bacteria, and cases of disease have been traced to this apparently inoffensive article. At Königsberg a course in bacteriology is being given by a physician, in which he maintains that the strictest sanitary and hygienic condition in things pertaining to the house should be inculcated; and in this country, in the Boston Cooking School, and doubtless elsewhere, there are many lectures given on bacteriology. The refrigerator is one of the danger spots, for bacteriologists tell us that the minutest organisms may thrive even in melted ice, and putrefactive bacteria once gaining access to the household refrigerator will breed and contaminate butter, milk, meat, and other foods kept therein. Cupboards and closets also afford an excellent breeding-place for the ever-present microbe, and housekeepers will do well to look to such articles as refrigerators, brooms, dusters, etc. — *Scientific American.*

Among the victims, says the *Philadelphia Medical Journal*, of pseudomedical fallacies is Rev. J. Hughes Parry, pastor of the Moriah Welsh Calvinistic Church, of Utica. The particular vagary which proved fatal in this case was neither Christian Science nor faith-cure, but the "rest-cure," which it seems is administered by a doctor of Meadville, Pa. Mr. Parry had been ailing for some six years with a complaint which had been variously diagnosed as some kind of dyspepsia or catarrh of the bowels. The most conspicuous feature of the treatment was complete abstinence from food for twenty days. At the end of this term the patient's complaint was found to be still present, therefore he entered immediately upon a second term, before the end of which period—specifically at the forty-seventh day of the fast—the patient declared himself cured. It is said that during this protracted fast he took no nourishment whatever, and restricted his diet rigidly to cold water, the loss of weight being thirty-six pounds. It is said that he was hungry only during the first week of starvation, while the system was getting used to living on nothing at all. After forty-seven days of famine he cured the kind of dyspepsia or catarrh of the stomach, or whatever it was; the patient began eating again, and then his trouble began. He was so reduced by the "rest-cure" that he died.

The following case of poisoning by corrosive sublimate, which was published in the *Gazette Médicale du Centre* for June by Dr. Joulia, is

remarkable in that recovery followed such a large dose. A woman, aged twenty-eight years, desiring to poison herself on account of a love trouble, took, dissolved in Malaga wine, the contents of two packages of corrosive sublimate (made up for baths). She swallowed exactly 370 grains of sublimate and the same quantity of tartaric acid. When seen she was incessantly vomiting and only asked for drink. The pulse was 140, small and irregular. The tongue, mouth, and pharynx were dark-red and swollen. The stomach was immediately washed out. The tube was introduced with pain and difficulty whilst the patient was hiccoughing. Thirty-five pints of albuminous water to which flour was added was used. An emetic of ipecacuanha was then given. The patient was collapsed; three and three quarter grains of caffeine was injected, and the pulse gradually improved. Swallowing was intolerable; only ice could be taken. On the following day there were complete anuria and diarrhea. On the third day ten ounces of urine, containing albumin, blood, and casts, was passed. Recovery ensued. The patient undoubtedly owed her life to the fact that her stomach was so thoroughly washed out a quarter of an hour after taking the poison.—*Lancet.*

ACCORDING to *The Lancet*, a fresh proof of the practical utility of the Roentgen rays has been supplied by a case published by Oberstabsarzt Dr. Baehren, of Wiesbaden. A soldier who alleged that he had been bitten by a horse was admitted into the military hospital with a swelling of the third finger, especially marked at the tip and extending to the back of the hand. A sinus developed after several weeks in the neighborhood of the joint between the first phalanx and the metacarpal bone, and the introduction of a probe showed the bone to be denuded of periosteum. The sinus healed up after being laid open and cauterized, but the swelling continued and mobility of the finger was impaired. An examination of the hand by the Roentgen rays resulted in the discovery of five needles in the second and third interosseous spaces of the metacarpus. There was also a small, scarcely visible, sinus in the fold between the second and third fingers. On the following day the skiagraphic examination showed only four needles, the man having extracted one of them through the sinus. All the needles were removed by a large incision, and the hand became quite normal. The man at first pretended that he did not know how the needles had come into his hand, but he afterwards admitted that he had introduced them because the hand was painful and he expected relief from the escape of blood. He had evidently inflicted these injuries on himself in order to obtain his discharge from military service, not foreseeing that by the aid of the x-rays his imposture would be detected.

NEW PUBLICATIONS.

DISEASES OF THE NOSE AND THROAT.

The new work by Dr. D. Braden Kyle, of Philadelphia, is a very welcome addition to laryngological literature. The author has devoted a great deal of attention to normal and pathological anatomy, and his classification of the various affections of the nose and throat is based upon sound pathological grounds. On page 21 the author divides the ethmoidal cells into three sets — anterior, middle, and posterior. This is contrary to the arrangement described by Zuckerkandl, and taught by Hajek and many other of the German authorities. The propriety of illustrating the position of the head for examination of the superior turbinate might be questioned. It would surely be a stumbling-block to the student and general practitioner. Under any ordinary circumstances it is impossible to see anything of the superior turbinate by means of anterior rhinoscopic examination.

Some passages in the book show a lack of care in their arrangement; for instance, in speaking of the accumulations of secretion in postnasal rhinitis, the author says: "The patient unconsciously swallows some of the secretion, and this collecting in the trachea and bronchial tubes, the esophagus, and the stomach, will soon generate a catarrhal condition in these parts." It is difficult to understand how any secretion properly swallowed can "collect" in the trachea and bronchial tubes.

A very admirable feature of Dr. Kyle's work, and one which will appeal to every student, whether young or old, is the careful attention paid to differential diagnosis. In many instances this is clearly illustrated by a parallel column arrangement.

The author's position in regard to most of the subjects treated may be regarded as fairly conservative, and certainly the book is free from any radicalism. The chapters upon Diphtheria, Neoplasms of the Respiratory Tract, Intubation, and Diseases of the Larynx seem specially worthy of commendation.

The colored reproductions of microscopical preparations, the new and original cuts, and the beautiful water-color reproductions add very much to the value of the volume. The book-making has been well done by the publishing house of W. B. Saunders.

W. W.

A Text-Book of Diseases of the Nose and Throat. By D. Braden Kyle, M.D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College, etc. With 175 Illustrations, 23 of them in Colors; 8vo, 646 pages. Philadelphia: W. B. Saunders, 1899.

PHARMACOLOGY AND THERAPEUTICS.

Students commencing the study of materia medica this year will have the advantage of finding available for their studies Professor Cushny's excellent manual on this subject. It is a contribution to the literature of rational therapeutics which is of distinct value. The author's principles of therapeutics are based upon the firm foundations of physiology, chemistry, and clinical medicine. The arrangement of the work is excellent, and there is little reason to doubt but that it will become one of the most popular manuals of the science of which it treats. A special feature of the work is the complete bibliography which is appended to each heading.

A Text-book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. For the Use of Students and Practitioners of Medicine. By Arthur R. Cushny, M.A., M.D. Aberd., Professor of Materia Medica and Therapeutics in the University of Michigan Medical Department, Ann Arbor. In One Handsome Octavo Volume of 728 pages, with 47 Engravings. Cloth, $3.75, net. Philadelphia and New York: Lea Brothers & Co., 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Treatment of Hernia in Children.

John Langton (*British Medical Journal*, Aug. 19, 1899) says that the operative cure for hernia should be undertaken:

1. In cases of irreducible omentum.
2. In cases of irreducible omentum with fluid in the sac.
3. In congenital hydrocele.
4. In operations for the relief of strangulated hernia.
5. In all cases of fluid in the sac of a hernia.
6. In all cases where it is impossible to efficiently return the hernia by mechanical appliances.
7. Where proper treatment is impossible owing to incompetence or ignorance of the mother.
8. In cases in which a truss has been worn for three or four years with no benefit.

In early infancy the operative cure for inguinal hernia often results in one of the most intractable forms of hernia—a traumatic vertical extrusion. The conclusions, therefore, which the author begs to suggest are:

1. That hernia in infancy, if properly and promptly treated, is a curable lesion.
2. That in children in whom there is a marked family history of hernia the preventive measures should be employed at as early an age as possible.
3. There is no evidence to prove that circumcision either prevents or cures hernia in infants.
4. The cases requiring operation are comparatively rare, and it should not be recommended in infancy.
5. Experience proves that hernia occurs at an age ill suited for operation, and that if properly treated it is usually cured long before any question of operation arises.

Gall-stones: Consideration of Their Etiology, Diagnosis, and Operative Treatment.

Joseph Ransohoff, in the *Journal of the American Medical Association* of September 16, 1899, says: "Gall-stones found in a gall-bladder are generally formed together—that is, about one and the same time. Their removal will not be followed by a recurrence unless a reinfec-

tion of the biliary ways occurs. Cholecystotomy, with drainage, should be regarded as the normal operation; save in exceptional cases the operation should be done at one time. Ideal cholecystotomy or cholecystendesis is not to be recommended. Cholecystectomy is rarely indicated in acute processes; it is more dangerous than cholecystotomy, since most stones are formed in the gall-bladder. Cholecystectomy is the more radical operation; it should be reserved for chronic cases in which a restitution of the gall-bladder to the normal cannot be expected. Cysticotomy is a safe supplement to incision of the gall-bladder for stones of the cystic duct. Choledochotomy, with suture and drainage, should be considered the routine procedure in common duct stones. Incision of the duct through the duodenum or from an incision in the loin will rarely be needed. Cholecystenterostomy has a limited but distinct field of application—that is, obstruction jaundice from malignant disease or impermeable cicatricial common duct stenosis."

Suggestion for a New Operation for Exstrophy of the Bladder.

J. H. Branth (*Medical Record*, Sept. 16, 1899) suggests in operating for this deformity the making of an incision just anterior to the scrotum and below the pubes, and by a hook draw out the penis through this incision. The fundus and almost the whole bladder will be lowered into the pelvis, behind the pubes, where it will be fastened by catgut stitches. Of course, the bladder will before this be closed by Lembert sutures and detached from adhesions above. The root of the penis will be made raw and stitched to the edge of the wound, through which it now protrudes. We shall now have the bladder in the normal position. The tendinous portions of the transversalis and oblique muscles, ensheathing the rectus muscles, can now be easily stitched together (the parts lie almost together) by continuous and recurrent suture, similar to that used in modern perineorrhaphy, to secure a firm union; drainage of the renal secretion through the groove in the epispadiac penis, the defective urethra, will of course be necessary. Later on efforts to build a roof to the urethra will become another problem, which seems a possible achievement if the plan up to this stage be successful.

Varicose Ulcer.

Professor Chipault read a paper a short time ago before the Paris Biological Society (*Medical Press*, September 6, 1899) on the treatment of varicose ulcers by stretching the sensitive nerves of the leg.

The nerve, he said, chosen for the operation should be that on the territory where the ulcer was situated, and more particularly the internal saphena or the musculo-cutaneous nerves. The treatment of the ulcer itself consisted of one of two methods. If it was small he advised total ablation; if, on the contrary, it was extensive, which was generally the case, he counseled the use of the rugine to convert a fetid wound into a healthy one, and obtain its healing by appropriate applications.

MEDICINE.

The Plague: Its Symptomatology, Pathology, Treatment, and Prophylaxis.

W. J. Simpson, M.D. (*British Medical Journal*, Sept. 16, 1899), says that there are two features especially characteristic of plague. They are, first, the slow, irregular, and gradual manner in which the disease acquires a hold over a locality into which it is imported; and secondly, the obscurity that often surrounds the earlier cases. The pneumonic variety, which is very infective, holds its infectivity through the fact that sputum frequently contains almost a pure culture of plague bacilli which get on to handkerchiefs, clothing, bedding and other articles of furniture, as well as on to the floor of the patient's room. The only certain means of diagnosis during life is to examine the sputum by spreading a small quantity on a cover-glass or slide, drying, fixing, and staining. The ambulant or mild variety of plague, which is a non-fatal form, is even more likely to escape attention than the pneumonic, because of only a slight constitutional disturbance which it may produce, and because it is often taken for some other disease. The bubonic variety of plague, as its name implies, is always accompanied by buboes, which usually appear at the commencement of the illness in the groin, armpit, or neck. The most common site is the groin and neck, and next is the armpit. The bubo varies in size, and is as a rule extremely tender and exquisitely painful. The septic variety of plague is a virulent type in which the lymphatic glands show no special enlargement during life, and consequently the bubo is absent; but after death the glands are found to be generally affected, being somewhat enlarged and much congested. The characteristic appearance in a necropsy of plague is that of engorgement and hemorrhage, nearly every organ of the body participating more or less.

The curative treatment of the plague has but a small share in lessening the general mortality of the disease, which ranges between

sixty and ninety per cent. Antitoxin treatment has hitherto practically failed. In the treatment of plague all that can be done is to secure the best conditions in order that the patient may make a good fight against the disease, and these consist of good nursing, early confinement to bed, the maintenance of the recumbent position to prevent syncope, careful feeding and general treatment to keep up the patient's strength and prevent complications if possible.

Treatment of Puerperal Fever by Injections of Common Salt Solution.

Dr. Eberhardt, at a recent meeting of the Vienna Versammlung Deutscher Naturforcher (*Medical Press*, Sept. 6, 1899), reported great success with an injection of sodium chloride in cases of puerperal fever, and more particularly in those septic cases where vomiting is persistent and no fluids can be retained on the stomach, whereby the fluids of the body are reduced and poison more concentrated.

From the report of many experiments Eberhardt showed that one liter of this 0.9-per-cent solution effectively produced diuresis, which promptly eliminated the bacteria with effete nitrogenous products. After this start the circulation of the kidneys became more vigorous, and averted all future danger of concentration in the kidneys. He was supported in this favorable report by Sahli, who could vouch for the beneficial effects of the solution.

Eberhardt strongly recommended the treatment to practitioners, by whom it could be easily applied without any danger to the patient, which is also a serious consideration in these days of highly forced esthetics.

A Case of Bilharzia Hematobia.

C. P. Childe, B.A., F.R C S. (*British Medical Journal*, Sept. 9, 1899), reports a case as follows:

"My patient is a white girl, aged sixteen, who has lived until two years ago in Natal. Her symptoms, which consist of intermittent hematuria, with some irritability of the bladder, the blood being passed at the end of micturition, have been present for four years, and are invariably increased by exercise. I may mention in passing with regard to diagnosis that the symptoms, when confined as in the present case to the bladder, are very similar to those of villous or polypoid tumor of the bladder; the bleeding is intermittent, and comes at the end of micturition, as in tumor; and, in fact, after hearing my patient's history, and not having in my mind bilharzia, I came to the conclusion that she very probably had some villous growth in the

bladder. A microscopical examination of the particles floating in the urine of course at once cleared up the diagnosis.

"On going into the history of the case I found that she had been accustomed to bathe pretty frequently in a fresh-water pool at a farm in Natal. The sex and habits of this patient are important points, as bearing on the theory held by many as to the mode of infection of the human body. Brock, who has seen many hundreds of cases in South Africa, never saw a female affected. With regard to her habit of bathing in a fresh-water pool, many competent authorities believe that infection occurs by the embryos penetrating the skin, urethra, or anus during bathing, and this is supposed to account for the absence of the disease in infants and very young children, and its great scarcity among females, who seldom bathe in rivers or pools in South Africa, while the opposite sex is frequently in the water. My patient is a female, and moreover was accustomed to bathe in a fresh-water pool, facts which bear suggestively on the above mentioned theory of the mode of infection. With regard to the treatment of this affection, I have not been able to find any drug recommended with confidence."

THERAPEUTICS.

The Treatment of Convulsions in Infancy.

All that is necessary during an actual attack of convulsions, says A. M. Gossage (*British Medical Journal*, Aug. 19, 1899), is in most cases to loosen the clothing about the neck, chest, and abdomen, and to lay the child on its back with the head slightly raised until it recovers consciousness from the fit and the subsequent drowsiness. The placing of the child in a hot bath, as is such a common practice, probably does no harm, and if the child be in feeble health it may be advantageous to use a mustard bath, which has decided stimulating properties. Cases, however, where the unconsciousness is unduly profound and prolonged, and especially if with this further fits are associated, require more active measures. Chloroform inhalation is the most efficacious of these, and profound unconsciousness is no bar to its employment, recovery from the anesthetic being usually accompanied by a return of consciousness. The inhalation of chloroform may be replaced, or in severe cases followed, by the rectal injection of chloral, in doses of three grains to an infant of six months, to which two or three grains of potassium bromide can be added if desired. If the chloral be retained, its sedative action on the nervous system is usually quickly manifested, while in other cases its presence in the rectum brings about the evacuation of an especially foul-smelling

motion, and this is generally followed by a return of consciousness. Some authorities have recommended the inhalation of nitrite of amyl in one-minim doses, and Eustace Smith praises the hypodermic injection of morphine in doses of $\frac{1}{24}$ grain to an infant of six months, and says that it can be repeated, if necessary, in the course of half an hour. Any local irritation which may be regarded as an exciting cause of the fit calls for appropriate treatment. For instance, if it be suspected that indigestible food is responsible, an emetic may be given, followed by a calomel purge, and in very exceptional instances it may even be justifiable to lance the gums.

Diet in Typhoid Fever.

Dr. E. J. Abbott (*Northwestern Lancet*, Aug. 15, 1899) says that it has been his practice for years to allow his typhoid patients what is termed "soft diet" instead of milk diet, namely, a diet consisting of milk if it is agreeable, buttermilk, all kinds of soups and broths, eggs, raw or soft, or the yolk, if they like, of hard-boiled eggs. By hard-boiled eggs he does not mean an egg that is boiled four or five minutes, just sufficient to coagulate the albumen, but an egg that is cooked from one-half to three-quarters of an hour. The yolk of an egg in this condition is easily digested and is nutritious. He also permits custards, rice, farina, junket, tea, coffee, chocolate, cocoa, ice cream, and particularly milk and cream-toast and all foods of that class. The writer says he has never yet had cause to regret feeding his patients in this way, and is convinced that this diet leaves less waste of indigestible material as a possible irritant to the ulcerated surface than does an exclusive milk diet. The writer also advises the lengthening out of the intervals of feeding from two to three or four hours, perhaps even longer, and thinks that by doing this his patients relish their food more than before, and that they will digest it better and will recover from the fever stronger and in better condition than they would otherwise.

Urotropin.

Dr. Knust, of Neustadt, West Prussia, in a paper read at the sixth session of the Northeast German Psychiatric Union, held at Westerplatte, near Danzig, July 3, 1899 (*Psychiatrische Wochenschrift*, No. 16, July 15, 1899; *Medical Review of Reviews*, September, 1899), mentioned having used urotropin in several cases of excitable and more or less unmanageable mental affection suffering from renal and vesical diseases, and also cystitis, pyelitis, etc., with the most excellent results. Especially brilliant was its action in one periodic case, with

persistent excitation, in which at the beginning of the attack the urine was still acid, but faintly cloudy, and got more and more turbid, and more and more loaded with mucus, pus, and micrococci as the seizure progressed. The prostatic hypertrophy and patient's excited condition rendered catheterism and lavage impossible. He was, therefore, on February 23, ordered to take urotropin in 0.5 gramme (7½ grains) doses four times daily. Even in two days the urine was improved, and by March 3 it was faintly acid and clear. For a time his condition got worse again each time that the urotropin was stopped; but by June 10 it could be discontinued. The patient's weight has greatly increased since he has been on the urotropin.

The second case was one of senile dementia, with a high grade of prostatic hypertrophy, and incontinence of urine to such an extent that the odor of the patient was extremely foul. Here the drug gave results similar to those of the first case, and more especially lessened the unpleasant odor, from which the whole ward was suffering.

In a third case there was an equally rapid if not permanent effect. The writer is convinced of its effect as a disinfectant upon the urine, and recommends its employment in cystitis, pyelitis, and other similar diseases.

The Treatment of Constipation in Infants and Young Children.

C. G. Slagle (*Northwestern Lancet*, Sept. 1, 1899) says that probably the best means of overcoming constipation in young children (as suggested by Holt) are diet, habit, massage, and an occasional enema or suppository. Diet can be rendered laxative by the addition of some of the malt preparations, fruit juice, etc., or of milk by adding cream and sugar-water (one or both). If a child two or more years old, less white bread, toast, crackers, potatoes, etc., and more green vegetables, oatmeal, Graham, corn, or rye bread, and opiates and carminatives—as astringent teas, etc. Gluten suppositories are best for continuous use, as glycerin suppositories are too irritating to be long continued.

The alimentation of nurslings: A little sugar-water (after Jacobi), cow's milk four parts to one of sugar-water, and rectal lavage with a urethral catheter, two tablespoonfuls of glycerin to one liter of warm water, or two tablespoonfuls of olive oil with the yolk of one egg to four drachms of water, etc.

Tuberculous Peritonitis Treated by Injections of Iodine.

Stefanili and Fabozzi (*Suppl. al Policlin.*, An. v, No. 11, 1899; *British Medical Journal*, Sept. 9, 1899) record the case of a child

aged thirteen admitted to hospital with ascites. The liver was not materially enlarged, and the spleen could not be felt. The heart was normal and urine healthy. There was a history of typhoid fever a year earlier. One sister had scrofulous cervical glands; otherwise the family history was good. Tuberculous peritonitis was diagnosed. On admission the child weighed 37 kilogrammes, and the abdomen measured 78 cubic centimeters. A solution of iodine 1 gramme, potassium iodide 2 grammes, and water 50 grammes, was made, and half a syringeful injected into the genital region; as this caused no inconvenience a whole syringeful was next injected daily for the first ten days, and then every other day. The treatment was begun on March 19. At the beginning of April some of the fluid was withdrawn and examined bacteriologically, culture preparations were made, and experiments on guinea-pigs instituted. No tubercle was found. At the end of May the child weighed 27 kilogrammes, and the abdominal circumference had decreased to 61 cubic centimeters. No fluid could be detected in the abdomen, and the child was discharged from the hospital cured.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Treatment of Dysphagia and Cough in Tuberculous Patients.

In a very clear and candid article on this subject, read by Dr. Freudenthal before the German Medical Society of New York, after citing the uncertain and often unsatisfactory results following the curettage of ulcerations in the larynx, the author gives at some length his experience with orthoform and heroin. Of some twenty-nine cases in which he had curetted tuberculous ulcerations in the larynx, eighteen were unimproved, seven slowly improved, and four showed a temporary improvement. He regards the value of curettage as a still undetermined question in laryngology. Dissatisfied with his own experience he began in 1897 the use of orthoform insufflations among his tuberculous patients at the Montefiore Home. He used it alone and in various combinations, apparently getting the best results from the following emulsion:

℞	Menthol	10.0
	Oil of sweet almonds	30.0
	Yolk of egg (about two yolks)	30.0
	Orthoform	12.5
	Distilled water q. s. ad	100.0

Ft. emulsio.

The emulsion containing yolk of egg is found to be of value in

preventing a separation of the orthoform and also to lessen the initial burning and irritation to which an insufflation of orthoform gives rise. He used intralaryngeal injections of this emulsion with the ordinary laryngeal syringe.

The other remedy which Freudenthal regards as so essential in tubercular affections of the larynx accompanied by cough is heroin, the morphine derivative. Heroin is quite devoid of the disagreeable after-effects of the morphine and codeine salts, while its sedative action upon the cough is prompt and decided. He lays stress upon the demonstrated fact that heroin affects neither the heart nor the circulation, and is a safe remedy to use in patients who may have some heart lesion. — *Monatsschrift für Ohrenheilkunde*, vol. xxxiii, No. 3.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Relations of Headache to Affections of the Eye.

Dr. S. D. Risley (*Journal of the American Medical Association*, Sept. 23, 1899) states that the following conclusions may be regarded as established by clinical experience:

1. Abnormalities of the ocular apparatus are in a large group of patients the sole and sufficient cause of headache.

2. Abnormalities of vision may be the unsuspected cause, and therefore the absence of symptoms obviously referable to the eyes does not exclude them as an etiologic factor in headache, insomnia, vertigo, petit chorea in children, and certain stomach derangements.

3. The recent or sudden development of symptoms, after attacks of severe illness, as typhoid fever, the exanthemata, etc., or in association with more or less acute exacerbations of some general dyscrasia, is not sufficient evidence against ocular participation in causing the symptoms.

4. The participation of the eyes as an etiologic factor in headache can be positively excluded only in the absence of ocular disease or after the most painstaking correction of any existing error of refraction or abnormality of binocular balance.

5. For the relief of reflex symptoms accurate corrections are essential, and these can be secured only by the more or less prolonged use of a strong cycloplegic.

6. Immediate relief by these corrections in a large group of patients is not to be expected, since the pain is frequently due to associated pathologic conditions of the fundus oculi, and these require time for cure.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Peripheral Paralysis of the Hypoglossal Nerve.

Aug. Hoffmann (*Neurologisches Centralblatt*, Feb. 1, 1899; *British Medical Journal*, Sept. 16, 1899) relates a case occurring in a girl, aged seventeen, who was also the subject of old disease of the middle ear. She had often suffered from inflammation of the glands in the neck, and four months before she was first seen she had a severe attack, after which the glands did not completely subside. Three months later she noticed that the left half of the tongue was smaller than the right. There was then some difficulty in speaking and chewing. When she first came under observation the left half of the tongue was small, thin, and wrinkled. There was no disturbance of sensation and no interference with taste; there was no paralysis of the palate or larynx. The right side of the tongue reacted normally to the electric current, but on the left side the reaction was sluggish, with a preponderance of the anodal closing contraction. The glands in the neck were still enlarged, but they subsequently became smaller. There was no evidence of disease of the vertebræ. No real improvement was recorded after prolonged electrical treatment. The reaction of degeneration showed that either the trunk or the roots of the hypoglossal nerve were affected. There was, however, no reason to suspect either acute or chronic disease in the center. Cases have been reported in which large swellings of the glands of the neck have been the cause of lingual hemiatrophy. As the glandular enlargement was slight in this case, Hoffmann thinks that the inflammation must have spread to the nerve rather than that there was any pressure on the hypoglossal nerve itself. In Erb's case there was an angina along with slight swelling of the glands. It is strange how so considerable a wasting of half the tongue should interfere so little with its movements.

Pachymeningitis Spinalis Externa.

F. W. Langdon and A. H. Freiberg report in the *Journal of the American Medical Association* of August 26, 1899, a rare and interesting case, which was of six weeks' duration when admitted to the hospital. Paralysis, accompanied by pain and rigidity of the back of the neck, had been developing during that time. Quadruplegia was then

present and practically complete; paralysis moderately rigid, almost "waxy" in type. Sensation was somewhat diminished at ends of fingers only, but four days later both tactile and temperature senses were impaired in areas which could be accurately diagrammed. The application of extension and counter-extension to the entire vertebral column caused startling improvement, both motor and sensory impairment rapidly disappearing.

Diagnosis included the possibility of: (1) cerebral diplegia; (2) poliomyelitis anterior; (3) multiple neuritis; (4) cervical myelitis; (5) spinal tumor; (6) hematomyelia; (7) hematorrhacis, external or internal; (8) leptomeningitis spinalis; (9) pachymeningitis spinalis interna; and (10) pachymeningitis spinalis externa—primary, (*a*) rheumatic, (*b*) gonorrheal; secondary, (*c*) tubercular.

By exclusion, diagnosis was narrowed to an external pachymeningitis with the probability in favor of a primary tubercular origin, and this diagnosis was only definitely settled upon after reaction, though slow, to tuberculin.

Extension, potassium iodide, hypophosphites, cod liver oil, and the open air constituted the treatment.

The Diet of the Neurotic.

Dietetic therapeusis of the neurotic is discussed by Henry C. Eyman in the *Journal of the American Medical Association* of August 26, 1899, who emphasizes the need and importance of the tissue-builders.

To certain patients a meat diet is most valuable, while others do better on milk, fish, and the farinaceous foods. Hypophosphites and pepsin with oil may encourage the taking on of fat. In some forms of neuroses, with dry skin, irritability, and motor restlessness, a meat diet and hot water are particularly indicated.

The melancholic dyspeptic, of foul breath, coated tongue, and constipated bowels, is greatly to be helped by proper diet—*e. g.*, before getting out of bed, a cup of hot water with a dash of brandy; a breakfast of meat and eggs; lunches at eleven and two, of beef tea or cocoa, crackers, milk, and fowl; dinner at six, consisting of broiled fish, roast beef, green peas, and asparagus and toast; at bedtime, a light meal with a small amount of some malt liquor. Milk or egg-nog after midnight is often of great service to the restless, depressed patient.

Fresh air and exercise are of course most important adjuncts to dietary therapeusis, but fatty foods, milk, ham, cod-liver oil, beefsteak, fish, fowl, farinaceous foods, eggs, and malt preparations are all of

advantage, and ale and porter oftentimes work wonders with melancholiacs. To the gouty—those of uric acid tendencies—farinaceous foods and nuts will prove of especial service.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

A Case of Syphilis with Precocious Gummata and Rupial Ulceration.

In the *British Journal of Dermatology* for August, 1899, Arthur Powell, Cachar, Assam, records the following case:

Mr. X——, aged forty-two, had connection on September 20, 1898, and again on October 3, with a woman suffering from a primary sore on the left labium. October 23 he first noticed a small pimple on the inner surface of the foreskin. This pimple broke into a chancre, with scanty, thin discharge. In a few days a similar sore formed on the opposing surface of the glans. By November 9 there were four chancres, which all now showed marked induration. November 15 a fifth chancre formed. The glands in both groins were now hard and enlarged. A firm cord of lymphatic induration, as thick as a common cedar pencil, extended up the dorsum of the penis. December 1 there were slight general roseola, general lymphatic enlargement, and "snail tracks" in pharynx and palate. December 5 some papules had become rupial. On December 9 there were fifteen clear, punched ulcers on the arms, body, and legs. December 15, fifty-two days after the first sign of the chancre, and seventy-two or eighty-six days after inoculation, there were four fairly symmetrical gummata in the muscles of the calves. These were quite painless and probably had existed for some days. There was a fifth on the dorsum penis. A sixth appeared about January 4 on the foreskin, which suppurated and caused a perforation. On February 13 two other gummata had suppurated; one had doubtful fluctuation; two were absorbed during mercurial inunction. There was a slight squamous eruption of the skin, mucous patches inside lips and cheek pouches, and kidney-shaped ulcers on both tonsils.

Hysteric Cutaneous Affections.

In the *Dermatologisches Centralblatt* for August, 1899 (*Journal of the American Medical Association*, Sept. 2, 1899), C. Rasch reviews the report of thirty cases of gangrenous ulceration of the skin in hysteric

subjects. Almost all were young women, and the affection almost invariably appeared on the front of the body, most frequently on the left arm, and lasted months and years. Rasch describes another observation of typical multiple bullous and gangrenous ulcerations on a housemaid, eighteen years of age, with unmistakable evidences of hysteria and family history of mental disturbances. He insists on the term "hysteric cutaneous affections," as even if it does not proceed exclusively from vasomotor disturbances, and there may have been primarily self-inflicted injuries, yet the impulse to these acts proceeds from the mental affection, the hysteria, in which the brain is always abnormal. There is usually a history of sluggish healing of wounds from childhood up. The only treatment is purely psychic, and is best carried out with complete isolation in a hospital service. The choice of local applications is immaterial, although powerful agents should be avoided on account of the low vitality of the tissues. It is best to refrain from paying too much attention to the lesions, and merely to seek to win the confidence of the patients to enhance the effect of suggestion. The prognosis depends upon the prognosis of the hysteria. While the lesions are merely transient in some cases, in others they are so persistent and imposing, and accompanied by such pronounced mental symptoms, such as suicide in Doutrelepont's case, that hospital treatment is absolutely necessary.

Pigmentation of the Mouth: Its Relation to Addison's Disease.

At a meeting of the Dermatological Society of London, held July 12, Dr. Colcott Fox exhibited a patient, aged forty years, with a remarkable pigmentation of the mouth, which had been developing for four years. The lips, gums, and mucous membrane of the cheeks were dotted with very dark, brownish-black, rounded pigment macules, mostly nearly the size of a split pea. They developed without subjective sensations. The man was apparently in perfect health, and had a good family and personal history. There was not the slightest suspicion of any adrenal disease, or carcinoma.

Dr. Stephen Mackenzie remarked that, in spite of the good health which this patient now enjoyed, he could strongly suspect an early stage of Addison's disease. On more than one occasion he had been enabled to foretell the onset of this affection, while the patient was in good health, by the pigmentation of the buccal mucous membrane.

THE MEDICAL AGE

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ORIGINAL CONTRIBUTIONS.

PNEUMONIA IN INFANTS; DIAGNOSIS AND TREATMENT.

BY W. P. NORTHRUP, M.D., NEW YORK, N. Y.

What are the three most useful symptoms and signs of pneumonia in infants?

By infants I mean those under two years of age; the pneumonia I limit to primary acute bronchopneumonia; by best three signs I mean a limited selection from the multitude of apparently equally important signs, of a few which in every-day work, taken in conjunction, serve most often as the basis for diagnosis.

The cases I have in mind are not superficial, clearly defined pneumonias, easily recognized by auscultation and percussion, but those beginning centrally and giving but late evidence of their character—cases which simulate meningitis or typhoid the first few days. Given a child acting sick—that is, dull and feverish—it is put to bed. Its symptoms in the first to third days may be, as regards the nerve centers, dulness increasing to stupor, or great restlessness, with slight occasional delirium. Added to this may be rigidity of neck, or general rigidity and pronounced stupor, making a very fair picture of meningitis.

Others, again, a little older, with a pneumonia beginning deep in the lung, working slowly to the surface, lie for days in an apathetic state suggesting typhoid fever. It is such cases in the early days of the disease that the practitioner is brought to face, and upon which he is pressed for an immediate diagnosis. What signs have we to recommend to aid him?

First, in acute inflammation of the lungs the respiration-pulse ratio tends to depart from the normal of 4 to 1, and approximates the proportion of 3 to 1—that is, instead of 80 to 20, it approximates 120 to 40. This I submit as the best one point. It is not new; all text-

books mention it, but do not emphasize it. I submit it for trial, and if the profession's experience generally is the same as mine it should be called out from the rank and file of many signs and promoted for excellent service. To say that the respirations are rapid is not enough. In children many things increase the rapidity of respiration; it is the *disturbance of respiration-pulse ratio* that is here intended to be emphasized. This is the first point.

What are the most useful three points? I have for the sake of emphasis put the last point first. It is taking the three points together that constitutes the aid to diagnosis.

The second point I would make is *fever*—a persistent elevated temperature, whether remittent, intermittent, or uniform.

Thirdly, râles, subcrepitant and crepitant, over a circumscribed area, and more certainly if limited to one side. These would complete the three points. Especially does this apply to infants under one year.

Summary: Fever, râles, respiration-pulse ratio which approximates 1 to 3.

The cases I have in mind have for three, five, or even eleven days given no physical sign in the chest. The first added signs by auscultation will be diminished, muffled, or feeble sounds of vesicular filling over the affected region; later, on coughing or deep inspiration, a bronchovesicular sound—that is, deep bronchial sounds coming to the air through aerated lung. Dulness will come last, and really in small infants contributes little to an early diagnosis.

In illustration, let me call attention to a chart from my service in the Presbyterian Hospital. The patient was fifteen months old, and had not been quite well for two weeks, having a slight cough, from which he seemed to be very much improved. Three days before entrance into the hospital he became sick, feverish, apathetic, lying quietly unless disturbed. The bowels were somewhat loose—three or four greenish passages in a day. On entrance into the hospital the record says he had slight evidences of bronchitis. These, however, disappeared in two days, and there was nothing to be found in his lungs. In this way he continued for several days. Physical examination was negative. He was seen by several physicians, and malaria was suspected, but repeated examinations of the blood showed no malarial organisms. As the chart shows there were daily wide variations in the temperature, there being in the first eight days two abrupt excursions from 98° to 105° F., once from 97° to 106° F. Up to this time, let it be remembered, the physical signs of the chest were negative, and the symptoms were high remitting and intermitting temperature, apathetic condition closely resembling the typhoid state, marked

pallor, no enlargement of spleen, rapid respiration. By some typhoid was suspected, malaria having been ruled out. The interest of the case centers in the fact that the disturbance of the respiration-pulse ratio was pronounced, and not only approximated 1 to 3 but persistently exceeded it. A summary of all respiration and pulse figures taken every four hours shows the respiration to be 2978 as against 7384; 3+ the aggregate figure of all respirations in that time was 8934, whereas the pulse was 7384, showing a difference of 1550, an excess on the side of respiration.

It was on this point that the writer of this paper made the diagnosis at the outset, and adhered to it through all the days before the appearance of consolidation, even though the physical signs of the chest were negative for three, five, seven, nine, and eleven days. On the eleventh day a small area of consolidation was found on physical examination over the root of the left lung behind. Its physical signs were, on auscultation, diminished respiratory murmurs on quiet respiration, harsh, rude, or bronchovesicular respiration on forced respiration, and coughing. From that time on the case was of no special interest, the crisis taking place on the seventh day of diagnosis, or the eighteenth of disease.

Until the eleventh day of disease there was no sign of consolidation in the lung, and after the first two days in the hospital examination of the lungs was negative. The patient resembled a typhoid case, and the two points on which diagnosis was persistently maintained were fever and a respiration-pulse ratio of 1 to 3. This case is cited in illustration to show the value of the rule, and it continued the longest from the outset to the development of the positive physical signs of any case in the writer's experience.

Treatment.—It is not an encyclopedic list that I wish to give, but to emphasize one or two things of importance in the treatment of pneumonia.

No treatment directly influences the pneumonic process. There is much that may be done to enable the patient to safely pass through the disease. In the fall service at the Foundling Hospital, especially during the epidemic of last December, I had special privileges in observing and treating primary acute bronchopneumonia in infants under two years.

There are again three points I would make as most important in treatment:

First, hygienic conditions: Fresh air, a large room, changing the patient from one well-aired and freshened room to another in like condition. The temperature of the room should vary inversely as the temperature of the patient—65° to 68° F. when the patient's tempera-

ture is high, and higher, say 70° F., when the patient's temperature reaches normal. An infant with high temperature and dry skin is in no danger of taking cold. A window should admit fresh air continually. However damp and raw the outer air, the warm walls and furniture of a heated house will temper it to the needs of the child. Nothing so refreshes an infant, nothing is more essential to the condition of the blood, nothing acts more favorably as a heart tonic, than cool, fresh air. On the other hand, the opposite conditions are these: the infant's crib is closely tented about with blankets; the windows are covered with sheets to keep off draughts; added to this are often in the room numerous relatives and large gas-jets consuming the oxygen. If a well lady faints from the exhausted air of a heated and crowded room, may not the overburdened heart of a pneumonia patient sometimes be seriously embarrassed in its struggle under similar circumstances?

No fever patient ever caught cold from air coming in contact only with the oval of the face. It is not the air going in at the nose and mouth that gives cold.

Secondly, the care of the digestion: Pneumonia disturbs the infant's digestion; flatulence embarrasses the action of the diaphragm; pressure upward against the heart may determine the unfavorable outcome of the disease. One might almost formulate the advice, "To cure pneumonia, treat the digestion."

Thirdly, the use of water: bathing, to save nerve exhaustion, or, to put it in another way, to stimulate the nerve centers. A physician once suffered great remorse because a child developed pneumonia after he had treated it several days for typhoid fever, using baths, carefully regulated feedings, etc. This error in diagnosis probably gave the child its best chance of recovery. I often think it would be well to make a diagnosis of fever and not of pneumonia, so that friends would allow one to treat the patient rationally.

I believe in treating an acute bronchopneumonia like a fever patient. It must be remembered always that a high temperature is normal to pneumonia. There is no disease in which the thermometer is so nearly useless as in bronchopneumonia of infants. It may even lead to harm. When the toxemia produces nervous symptoms—stupor, great restlessness and sleeplessness, slight delirium, etc.—a bath soothes and prepares the way for quiet sleep. If the circulation is poor, the feet cold, the heart irregular, a hot foot-bath is of service. In most cases a hot foot-bath acts more favorably in equalizing the superficial circulation than a whole bath, and is apt to disturb the patient less. If the patient is stupid or delirious and nauseated from toxemia associated with high fever, I found in my last hospital service

that the following plan of administering cold water was most serviceable: Tubbing was fatiguing to the child; a pack in its bed was better. The legs and feet were wrapped in a warm flannel blanket, bottles of hot water being enclosed with the feet. The arms and hands were similarly wrapped in warm blankets, including warm bottles. Thus the limbs were warmly wrapped; the trunk, neck, and head were free. Cold wet towels were wrapped about the trunk, and an ice-cap was put upon the head. Usually the effect of this was to produce quiet sleep, a better pulse, clear sensorium, an ability to take food. It was believed that keeping the feet and hands warm would keep the puerperal arterioles from contracting under the cold swathing. On the whole, this method of applying cold water proved the best of all those tried.

Fourteen years ago I tubbed my first pneumonic child, and I have always tubbed all alcoholic pneumonias in my Presbyterian Hospital service. Never have I had anything but encouraging experiences with bathing in pneumonia.

Again, I suggest it might be policy to render a diagnosis of fever instead of pneumonia so long as the traditional fear prevails of water and air for pneumonia.

Water should be freely administered internally as well. The refreshing cold water on the lips, in the mouth and stomach of a fever patient need only be suggested.

There is no need to discuss drugs here. Suffice it to say I use strychnine sulphate in rather larger doses than some. I never prescribe less than $\frac{1}{100}$ of a grain for any case; usually $\frac{1}{60}$ of a grain every four hours is the maximum for a child of one and a half to two years. In short, when the heart needs to be drugged I give strychnine, not hesitating to carry it to the point of increasing the deep reflexes. I may further add that a pneumonia case doing badly should never be despaired of, but should have heart stimulants, selecting from the list nitroglycerin, alcohol, digitalis, or alternating two of them.

Poultices.—Here we meet tradition again. Every child, whether experiencing a temperature of 106° F. or less, is liable to be enveloped in a tightly wrapping poultice. A heavy, tightly wrapping poultice impedes the action of the thorax, interferes with the expansion of the lung, macerates the skin, overheats the fevered patient, and does not modify the course of the lesion favorably. Its sole usefulness, in my opinion, is to relieve pain when it is of superficial origin. A light poultice of flaxseed and mustard, so made as to lie about the back and sides of the thorax, not binding it, the poultices used intermittingly—two to four hours on, then two to four hours off—causing

redness of the skin, is all the useful purpose it can serve. The skin should be allowed to dry between poultices.

Summary.—The best three signs of obscure beginning pneumonia in infants under two years are:

1. Disturbance of pulse-respiration ratio, so that it departs from the normal of 4 to 1 and approximates 3 to 1.

2. Fever: continuous, intermittent, or remittent.

3. Râles: fine.

Treatment.—(1) Hygienic: fresh air. (2) Dietetic: avoiding indigestion and flatulence. (3) Hydropathic: baths or packs.

Poultices, for pain only, should be used intermittingly.

Heart stimulants: strychnine, nitroglycerin, alcohol, digitalis, when needed.

Antipyretics (coal-tar products) are mentioned only to condemn them absolutely.

LARYNGOLOGICAL X-RAY WORK.

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When the description of the discovery of the *x*-rays by Professor Roentgen was first published to the world, the public fancy was caught at once, and the most marvelous and absurd results were expected from this new form of radiation. The medical profession and laity as well were inclined to misjudge and grossly overestimate the possibilities of this new method of diagnosis, and finding that there are decided limitations to the applicability of the rays, there has been in some quarters a reaction against their employment and a general decrying of their value as an aid to accurate differential diagnosis. The truth is that the study of *x*-radiation is still so much in its infancy, and its phenomena so imperfectly understood and so little developed, that we cannot at the present time prognosticate its limitations and future importance.

Possibly in the department of laryngology the new radiation has thus far accomplished less than has been the case in other branches of medicine. Its results have been most decided in bone surgery; in the search for foreign bodies; and it is already considered an important addition to the diagnostic methods in obstetrics and gynecology.

To the laryngologist the *x*-rays have thus far been chiefly of service along four lines, viz.:

1. In the detection of foreign bodies, or perhaps better, in their accurate localization, so as to determine the advisability and character of the operation required for their removal.

2. In determining the ossification in the cartilages of the larynx and trachea, a subject which had, as since shown, never been accurately determined before the advent of the *x*-rays. Our early knowledge of the age at which ossification takes place in the various cartilages, and of the focal centers in which it takes place, was derived partially from analogy, and in part from chance dissections and fractures. Now, however, we can know with scientific exactness the time and the points at which all the cartilages ossify.

3. In the diagnosis of intrathoracic growths. Rosenberg, of Berlin, reported last year an interesting analysis* of twelve cases of intrathoracic growths which caused some involvement of the respiratory tract, either compression of the trachea or some form of vocal cord paralysis. In September, 1898, I published an abstract† of this report of Rosenberg, with some of his general conclusions. The character of the shadow cast upon the fluorescent screen is naturally dependent upon the density and specific gravity of the growth examined—as, for instance, a dense carcinoma would give a much more prominent shadow than a lymphoma; and in any growth the shadow would be much more intense in any part in which calcification had taken place. In aortic aneurism the shadow was found to have a definite characteristic shape, its periphery having the form of a circle or an ellipse, and pulsating equally in every direction. This last feature—the character of the pulsation equal in every direction—was a point found to be of value in the differential diagnosis of aortic aneurism. For instance, an esophageal carcinoma might be attached to the aorta and pulsate with it, but the pulsation shadow in this event would not be symmetrical in every direction.

4. The *x*-rays seem likely to prove of distinct value in the early diagnosis of tubercular processes in the lungs. Last year Kelsch, one of France's most eminent medical military men, after a series of investigations confirmed by the reports of other observers, proposed the application of the rays for the precise precocious diagnosis of pulmonary tuberculosis in the army. He brought up also the possibility of eliminating from the army those young latent tuberculous patients whose disease cannot be detected by the ordinary means of percussion and auscultation.

This year in a lecture reported in the *Johns Hopkins Hospital Bulletin*,‡ Dr. Trudeau, of the Saranac Lake, N. Y., Sanitarium, speaking of the unsolved problems and future work in tuberculosis, laid considerable stress upon the use of the rays in the diagnosis of incipient tuberculosis. He said that the height of the excursion of the dia-

* *Archiv für Laryngologie*, vol. viii, Heft 3.

† MEDICAL AGE, vol. xvi, No. 18, p. 569.

‡ *Johns Hopkins Hospital Bulletin*, No. 10.

phragm and the presence of a light shadow over the suspected area in the lung may help greatly toward reaching a correct conclusion, even before unmistakable symptoms are present.

It seems likely that it will be necessary for the perfection of this method of diagnosis that observers be trained in the use of *x*-ray apparatus and in interpreting with accuracy the delicate variations in the shadows that fall on the fluorescent screen, in the same manner that the skilled ophthalmologist requires years of practice and training in the use of the ophthalmoscope, or the master of internal medicine in the use of the stethoscope and other diagnostic appurtenances.

The therapeutic value of the *x*-rays will probably, in the light of experiments thus far conducted, be limited in range. Already their use in the treatment of pulmonary consumption has proven generally unsatisfactory and inefficient, though there was some prospect two years ago that the rays would have a direct antagonistic or destructive effect upon the bacillus tuberculosis. Scattered and comparatively infrequent reports are published from time to time as to the value of the rays in the treatment of lupus of the face. Albers and Schönberg* in 1898 published a report of two cases as cured by the application of the rays. In the correspondence in a recent number of the *Journal of the American Medical Association*,† in a letter describing matters of medical interest in Hamburg, Dr. Bayard Holmes mentions incidentally that Kümmell at the Eppendorfer and Krause at the Altona General Hospital are using the *x*-rays with no other therapeutic agent as a routine in the treatment of lupus of the face. Kümmell stated that he had treated twenty such cases successfully. The exposures are made at a distance of nine or ten inches once or twice a day, for fifteen or twenty minutes at each exposure.

Dr. Scheppegrell, of New Orleans, is the first laryngologist of prominence to give the profession an account of the apparatus and of the adaptability of the rays in the field of otology and laryngology. In his recently published text-book‡ he devotes some twenty-four pages to the subject, with which he deals in the most practical manner.

The first case which I desire to report was a little girl three years old, the patient of Dr. Gray, of Pontiac, referred to me by Dr. Connor, of Detroit. On June 10 of this year, while at play with the family button-box, she filled her mouth with buttons and had a sudden attack of violent coughing. There was immediate and decided dyspnea and cyanosis. The family physician was called at once, and

**Deutsche Med. Wochenschrift*, No. 27, 1898.

†*Journal of the American Medical Association*, vol. xxxiii, No. 8.

‡ Electricity in Diseases of the Nose, Throat, and Ear. G. P. Putnam's Sons, N. Y.

under the influence of emetics and the inverted position one or two buttons were expelled, whether from the trachea or esophagus could not under the circumstances be determined. The child soon became more comfortable, but had recurring attacks of dyspnea without any complete relief during the next twenty-four hours. About noon of the 11th the child fell forward while at play out-of-doors, and had a sudden very severe attack of choking, but became more comfortable in about an hour, and there was not much change in her condition during the following twenty-four hours. When I first saw her, in the afternoon of June 12, there was slight cyanosis, with embarrassed, noisy respiration, phonation being unimpaired. From the history it was certain that there was or had been a foreign body in the respiratory tract, but the variations in the symptoms made its possible location a matter of some uncertainty. With the stethoscope a peculiar whistle could be heard in the trachea, but there was no impairment of the normal vesicular murmurs in the chest. Through the courtesy of the Wayne County Poor Commission, and Dr. Marker of the asylum staff, the use of the very complete apparatus at the County House has been placed at the service of the profession in Wayne county. In examining this case with the fluoroscope a shadow could be detected at the level of the second and third cartilages of the trachea, looking from before backward, but no shadow could be seen on transverse inspection. A mark was made with an indelible pencil on the skin over the shadow. As it was late in the evening and the child's condition did not seem immediately dangerous, she was sent to Harper Hospital, where with the assistance of Dr. Mann I performed a tracheotomy on the morning of June 13, having as a guide for my incision the mark made the evening previous. After exposing the trachea I incised the second and third cartilaginous rings, and found lodged in the tracheal lumen a metal hook, part of a contrivance used to fasten the back of a woman's skirt. The hook was five-eighths of an inch long and one-quarter inch in width. It was lodged in the wall of the trachea, but was easily extracted, and the tracheal incision was so short that the edges of the wound came into good apposition when the retractors were removed. No tracheotomy tube was required, and a portion of the external wound was closed with silk, leaving only a small opening for the escape of air. After the first twelve hours no air passed through the tracheal wound, and the child made an uneventful recovery, leaving the hospital on the seventh day.

The second case was that of an old gentleman seventy years of age, who did not present any features of special laryngological interest. This patient had some carious affection of the superior maxillary bone about two years ago. He recovered after suitable operative

interference, but for some months suffered from a low form of general septicemia. During this period he had a severe attack of pneumonia, and following that imperfect resolution in the lower portion of the right lung. When I first saw him in consultation with Dr. E. R. Campbell, of Flint, in June of this year, it was possible to obtain with the fluoroscope a very satisfactory outline of this thick-walled abscess cavity. As the patient and his family refused to submit to any surgical operation, and also because the patient was evidently suffering from general septicemia due to absorption from the pulmonary abscess, I made an effort to secure drainage of the cavity by inverting the patient. Each morning he was placed upon a cot, the foot of which was elevated twelve inches from the floor. He remained in this position for two hours each morning, and again for one hour during the evening. By this means a very profuse expectoration was brought about during the time that he was in the partially inverted position, with the result of a greatly diminished cough and expectoration during the remainder of the day and night. This treatment has been continued for over four months; the patient has gained very markedly in weight and strength. The sputum, diminished in amount, has lost its purulent character, and the patient being freed from his cough is able to sleep well at night, and is quite free from his former general unpleasant symptoms produced by absorption. During the past summer he has taken nuclein solution with apparently considerable benefit. I regret that I am not able to present a radiograph of this case. The patient had read in the daily press of certain burns following the use of the *x*-rays and refused to submit to another exposure.

The third case, Mr. D. G——, aged sixty-five, a retired lawyer, is more complicated in character. When I first saw him in October, 1898, he had been annoyed for a period of eighteen months by a very noisy deglutition, slight cough, and a mild chronic pharyngitis, with some regurgitation of food within two hours after eating. Attempting to pass an esophageal bougie, it was arrested about nine and one-half inches from the incisor teeth. I saw this case in consultation with Dr. Mann, and in the absence of any physical signs determined by percussion or auscultation, we believed that we were dealing with a not uncommon spasmodic stricture of the esophagus, and I carried on a line of treatment with galvanism, using olive-tipped metallic bougies for the negative pole and a current of six to eight milliamperes strength. This treatment I carried on for two months, and though making a certain amount of progress I was not able to pass an ordinary bougie entirely by the obstruction into the stomach. Feeling dissatisfied with the result of my work I persuaded the patient to

accompany me to Wayne for a fluoroscopic examination of his chest. I took a photographic plate and made an exposure for twelve minutes, but owing to some defect in the plate or too short an exposure the negative was valueless. With the fluoroscope, however, I was able to differentiate a decided shadow, semicircular in form, about one and a half inches in diameter, which appeared at the level of the first rib on the left side of the sternum. This shadow I interpreted as a solidified mediastinal or peribronchial lymphatic gland, at the side of and behind the esophagus. The slight amelioration of the patient's symptoms under treatment I attributed to the softening of the gland under the influence of the galvanic current. Owing to the position of the obstruction I told Dr. Mann and the patient's relatives that within a few months we might expect to find some form of vocal cord paralysis, due to irritation from pressure on the left recurrent laryngeal nerve. At that time the larynx was clear and functionated perfectly. In March of this year, while visiting friends in Washington, D. C., the patient consulted an eminent surgeon, who had him under observation three days at Johns Hopkins Hospital. He gave a written opinion that the patient was suffering from a large diverticulum of the esophagus, advised an early operation for the removal of the pouch, and stated that the patient would slowly starve to death unless he submitted to early operative interference.

This advice naturally made the patient very nervous and apprehensive, and he went at once to Chicago to consult another eminent surgeon. By the latter he was examined and informed that he was suffering from a mild form of chronic pharyngitis, and needed treatment by means of sprays and astringent applications.

I next saw the patient in April, and in examining the larynx I found the expected laryngeal affection. The left vocal cord phonated properly, but in inspiration it stood in the cadaveric position with paralysis of the abductor, the musculus crico-arytenoideus posticus. Fortified in my opinion by the development of this symptom I recommended the patient to pay a visit to Carlsbad, with which resort he already had an acquaintance, and place himself in the hands of his physician there for examination, and if deemed advisable receive the benefits to be derived from a course of treatment at the springs.

In their examination of the patient Drs. Gans and Mueller, of Carlsbad, have observed the same shadow which I found with the fluoroscope, but they have given it a different interpretation, believing the shadow to be produced by a dilatation of the aortic arch pressing on the esophagus and the left recurrent laryngeal nerve.

It will probably be impossible to determine with absolute accuracy, before the demise of the patient, just the pathological condition that

exists in his thorax, but as against the last diagnosis I would submit these objections, which are of course negative rather than positive:

1. The absence of any specific history, which is most commonly a precedent of aortic aneurism.

2. The absence of any signs of sclerosis in the superficial arteries of the body; his arteries are all elastic and easily compressible, and his appearance much belies his true age, suggesting only some fifty years to his credit.

3. The absence absolutely of any physical signs of aneurism on percussion and auscultation. These might be absent if the dilatation was small, but with so great a dilatation as the fluoroscopic shadow would imply, one would expect a typical bruit. In this connection, too, I would suggest an example cited by Rosenberg in the article which I have mentioned. Professor Chiari reported a case in which on the fluorescent screen a pulsating tumor of the size of a small apple appeared. Some six or eight observers examined this case with the fluoroscope, and some were inclined to call it an aneurism. It did not, however, pulsate on the right side, but only on the left, and not quite with the heart pulsation, but a trifle later. The post-mortem section in this case showed a carcinomatous mass attached to the aortic arch.

Sendziak, of Warsaw, Russia, published an article of which I found a German abstract,* entitled "A Contribution to the Diagnostic Value of the X-Rays." In the case of a man fifty-five years of age, who had complained for three months of dysphagia, a stricture was found in the upper third of the esophagus, and later a right-sided paralysis of the musculus crico-arytenoideus posticus. Under transillumination by the Roentgen rays an irregular dark spot was observed on the right side near the aorta, which according to the author had its origin in certain enlarged lymphatic glands. For these reasons I feel that the correct diagnosis of this case is still *sub judice*, and that the opinion which I gave the patient's friends in April still has some reasonable ground on which to stand.

PROFESSIONAL ADAPTABILITY.

The necessity for adapting oneself especially to a particular calling as a preliminary to proficiency therein involves long, careful, and costly preparation at the outset, and its fulfilment exacts unceasing vigilance ever afterward; but it is unquestionably the best safeguard possible to be thrown around the different vocations and avocations. Without it, human affairs would not lend themselves to intelligent

* *Internationales Centralblatt für Laryngologie*, etc., Jahrgang xv, No. 1.

organization—no one would know or feel his particular place in any sphere—and the majority of people would lose the best results of their efforts because of inefficient application of them. This is, however, but a single point of observation between the alpha and omega of adaptability, and it may profit the physician to pause long enough in the taut traces of his busy life to inquire how much he already owes to this useful faculty of the mind, and to consider if he may not further gain by its further development.

The more exacting the permanent standards and every-day demands of any calling, the more clearly marked are the necessities for individual adaptation to it. It is scarcely to be doubted that at such times as they consult personal sensibilities alone, within the shadow of some disagreeable fact or condition forced upon them, nearly all professional men imagine themselves all but willing to give up the struggle of trying to make their lives' works well-rounded and unquestioned successes, and find it more or less difficult to keep in needful subjection the self-acknowledged leaning toward primary life principles of "small needs and light cares." Indeed, they are on occasion extremely inclined to disagree with the philosophers who teach that one is in reality what he hopes and strives to be, and to believe instead that they are what their friends, acquaintances, and patrons, and even what their critics, make them—that they are first, last, and all the time mere creatures of circumstance, slaves to conditions over which they have but little control, victims of the whims, selfishness, and penuriousness of others, and that what they hope for, strive for, or even what they accomplish, form but a minor link in the chain of their destinies.

While admitting that the practice of medicine is by no means an untroubled or self-ministering vocation, we are nevertheless justified in maintaining that better and more favorable conditions for the prosecution of purely personal professional effort have really never existed. Evolution and experience charge high for tuition, though upon the whole we should perhaps be loath to dispense with the results of their instruction. Talent, purpose, and industry have always been essential to the achievement of success, either professional or commercial, and to this trio we may well add another, adaptability, that faculty which enables one to intelligently conform himself and his interests to circumstances. Were the roads to our ideals straight and smooth, lined with cushioned benches, and traveled by none but good Samaritans and generous, square-minded comrades, the journey itself would be a cordon of holidays. But we know only too well that such journeys lie alone in Utopia, for which reason we should not be disappointed if our human feet cannot pass over

them. We are hedged about with limitations of many kinds, and while some of them may be eliminated or moved farther away by personal effort and public progress, the great majority of them must simply be endured. Everything that mankind has ever achieved has been, however, in spite of the difficulties in the way; and glancing in imagination at what has already been accomplished, we ought to be able to muster enough courage and spirit, as well as strength, to keep in peaceful line with our self-appointed tasks.

The fancy of returning to primary life principles of "small needs and light cares" is very fine in theory, but those who are the most fluent about such principles have had usually the fewest actual experiences with anything of the sort. We might dispense at once with all the organization and division of the present day—mechanical, legal, medical, commercial, and so forth — but we would soon find doing without them much more tedious than tending the means by which essential ends are now reached with judicious economy of time and labor. We have all known easily ruffled practitioners, exasperated with some difficultly managed patient, to ponder on their way home how pleasant it would be to go back to the farm or workshop, and live in personal freedom once more and forever, without a thought of how to save certain people from their own wilfulness and ignorance. But alas! instead of escaping therefrom by so doing, we would only find ourselves in another classification of them. You have but to cultivate confidential relations with typical representatives of these two as well as of other great classes to have your ears filled with their troubles.

Distance lends enchantment to the view of conditions other than those by which we are ourselves surrounded. Little do we realize perhaps how binding ourselves permanently fast to the peculiarities of some narrower vocation would try body, soul, and spirit, after we have once learned independence of action and experienced the handling of larger things. If we should return to the farm, we would necessarily be obliged to adapt ourselves to the plow, the hoe, the pitchfork, the grindstone, and other implements of our chosen field; our hours would have to harmonize with those of the rural class, and our incomes to the mere market value of our physical exertions, perhaps losing our time altogether in inclement weather, and earning little or nothing for four or five months of the year. And so we would go on indefinitely — nothing ahead but simple routine, nothing else behind. In his youth John Quincy Adams rebelled at the hard rules of Greek and Latin until his father gave him the choice between ancient languages and modern ditch-digging; and it is said that he followed the latter occupation for about a week, never again to complain, in the presence of his father at least, of the difficulties in the

student's path. An irksome network of uncongenial conditions would likewise surround us in the narrower and less important sphere, from whose limited view-point the professional world would soon rise to our vision like a haven of rest and promised contentment, and toward it we would be irresistibly drawn. Instead of a student finally contented with difficult books, we should have a physician finally contented with a difficult practice.

The main difficulty with which physicians in general and the younger ones in particular must contend—allowing that their practice is on a firm and well-paying basis—is found in the necessity for living and working always on the *qui vive* lest something prejudicial to reputation and established interests may happen, as likely as not without foundation in fact or reason, and yet strong enough to overthrow one in many minds. Some practitioners may safely show their native independence in any way they choose, but a larger number, especially in small towns where they are known by and know practically every one, find it best to keep forbearance ever with them. Talent, purpose, and industry reach their highest usefulness unhindered by these and kindred annoyances, but surprisingly great results may be accomplished in spite of them. In general practice none of these qualifications are often allowed their longest and most effective range, while they must on the other hand come in contact with personalities and things certain to destroy much of their strength, spirit, and force. But when one finds himself in a condition of this kind, he should not consider it a unique but rather one of a usual series of dilemmas, differing only in local coloring and in degree from countless others. The troubles to which reference has been made are not yours or mine alone, but also the profession's and the world's; and we will do well to allow the profession and the world to bear their full share without trying to be Atlas to them ourselves. An esteemed medical contemporary suggests the real source of personal strength in such cases. "We are placed," is its message, "in a world ruled by unchangeable law, with but one power especially designed to make life tolerable—the power of adaptation. With a plastic physical and mental constitution, with experience for our teacher and memories and records as guides, we have found that only by adapting ourselves can we find real remedies for unfortunate surroundings."

Every man has a genius or talent for something, and simple perseverance will sooner or later show him the way. If he be a round man, let him not try to fit himself into a square hole or niche because, perchance, that may be nearest, but, discovering that his measure was not taken for that particular work, let him go on his way earnestly seeking that for which nature intended him, and he is morally certain in time

to find it. It would be the part of professional conceit to claim that all practicing physicians have found their true forte in medicine; and it is undeniable that many men of splendid qualifications for success in this field are, unfortunately for themselves, for us, and for the world, settled otherwheres. Nothing is more lamentable to behold than the wrong person trying to do the right thing. But let the right person find the right thing—and there is a right person and a right thing for every one and everything—then we have men who reach to the height of their possibilities and who honor the spheres of activity to which they belong by the tenor and success of their lives. The modern Englishman is the best human type of thorough adaptability to conditions as he finds them. That is the quality which has scattered British colonies all over the world, and makes it well-nigh impossible for the Union Jack once up ever to come down. The Englishman seldom fails to adapt himself to the necessities and exigencies of new conditions. He may bluster and swear that he will never yield an inch, yet he cannot escape his own Anglo-Saxonism. His race tendency is in the long run a sense of justice. When the British Government yields a point because the English people decide that it is a moral duty to do so, the surrender becomes a victory. A professional career is not unlike a government in this respect—it formulates a policy and keeps to it with reasonable exactness, but that policy may be at times subordinated to the exigencies of the occasion. A code of professional rules without the possibility for any shade of exception would ultimately prove too burdensome to bear. We believe in courtesy, but there are times when we must suspend it and ask the interloper in no uncertain tones to depart from hence. Adaptability is the quality which enables the physician to courteously open his office door to show out a desirable patron, and the next minute, if need be, to insist with force and manly vigor upon the settlement of a delicate situation as appears to his judgment and sense of honor right and best. That same quality allows us to try over and over again to do a certain thing, until reason as well as patience is exhausted, and then to refuse outright any further useless trials.

The efforts of a single individual, or those of a class, or those in the same profession, even if all were in accord, would fail to change the order of things in society, or hasten the slow evolution of human nature. "If a man suffers from a frail constitution," remarked the medical contemporary already quoted, "he will not be helped one whit by dreaming over a physical ideal; but he can consider the one weak spot, and then study and experiment until he happens upon a course of living best suited to him and most conducive to his prolonged life and better being." Even so, if one does not exactly fancy the exist-

ing social, political, or professional conditions in which he is placed, and yet deems it best to abide among them, he can at least make himself thoroughly familiar with them as they are, and be ready to act most intelligently with regard to them, thereby reaping the benefits of quick comprehension and adaptation. It is not the man who rails at the existence of disease, or some flagrant fault, but the one who recognizes it and can deal intelligently with it, who accomplishes the most for the attainment of his own ideals, for the profession of which he is a part, or for the world. We should do what we can to square accounts with nature and unfortunate conditions, not by foolishly attempting to alter the laws of the one or cease the existence of the other, but by exerting to its normal fulness the one safeguard thrown about us—the power of self-adaptation. All other things being equal, he will best succeed in his active life who so employs his forces as to utilize existing currents rather than trying against long odds to go contrary to them. The mating of oneself to the environments of life is more or less a matter of personal adaptation. "Every person has two educations," saith the proverb, "one which he receives from books and from others, and one more important which he gives himself." We might modestly add a third and say—*and yet another one more important still, which nature and training confer, the education of self-adaptation.* Understandings with fellow physicians, and the various types of medical associations, the tenor of the professional press, etc., aid in smoothing professional difficulties. The right sort of adaptability, however, robs them of much of their disquietude for us, enabling us to put ourselves in positions to be the least affected and the least harmed by them.

THE following note is from *Nature* of May 11, 1899: "At the last meeting of the Anatomical Society of Great Britain and Ireland Dr. Elliot Smith settled a point in the comparative morphology of the brain which at one time was the subject of a heated controversy between Huxley and Owen. In 1861, it may be remembered, Owen maintained that the calcar avis and the calcarine fissure which causes it were characters peculiar to the brain of man, a statement which Huxley showed to be untrue, the formation being well marked in all primate brains. Dr. Elliot Smith has reached the further generalization that the calcar avis is a character shown by all mammalian brains, with the possible exception of the prototherian. He identifies—and the reasons for this identification do not seem capable of refutation—the calcarine fissure of the primate brain with the splenial fissure of the brain of other mammals. This generalization will materially assist in homologizing the primate and unguiculate 'pallium.'"

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

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EDITORIAL ARTICLES.

CAN THE HANDS BE STERILIZED?

The question of rendering the surgeon's hands sterile again and again comes up for discussion. The supreme difficulty which attaches to the achievement of absolute asepsis creates doubt as to the complete efficacy of accepted methods of sterilization. The latest investigators on the subject are Gottstein and Blumberg, who report their experiments in a recent number of the *Deutsche Medicinische Wochenschrift.* These experiments were made with a view of testing the efficacy of Fürbringer's method, viz., three minutes' scrubbing in hot water and soap, one to two minutes' soaking in six-per-cent alcohol, and finally, scrubbing with a 1:1000 solution of bichloride. The result of such disinfection was glaringly unsatisfactory, so the periods of immersion were lengthened to ten minutes in hot water and soap, three minutes in alcohol seventy-per-cent strength, and two to three minutes in sublimate solution as before. The results were better, only fifty-three per cent of cases showing germs instead of 61.3 per cent as before. The disinfecting procedures were continued until they occupied a longer period than could be given in practical surgery, and still twenty-nine per cent of cases showed germs present. This seems to raise the question, Can the hands ever be made sterile? The germ most frequently present was the staphylococcus albus, one which Bischoff has shown possesses pathogenic properties.

The methods of disinfection pursued by American surgeons do not differ materially from the method of Fürbringer. Taking the latest surgical text-book, Park's Surgery by American Authors, Nancrede therein urges great care in having the water sterile, advises the use of a potash soap or soft soap combined with five per cent of hydronaphthol, this to be followed by immersion in ether or alcohol, and finally, the hands to be immersed in a 1:2000 sublimate solution for five

minutes. Instead of sublimate solution Park recommends mustard flour mixed in the hands to thin paste and removed by sterilized water. This, he says, proves a successful germicide. These proceedings, however, do not differ materially from the procedure of Gottstein and Blumberg, and would probably not exemplify better results than seventy-one per cent of germ free hands.

The difficulties in securing absolute asepsis being well-nigh insuperable, the question of operating gloves again enters the field of practical surgery. It was the danger of infection from these sources which led to the adoption of gloves by Mikulicz. Knitted gloves were used with marked success, these being much simpler than the rubber gloves of Friedrich. Such a proceeding as the wearing of gloves must not, of course, induce the surgeon to abridge in any detail the customary antiseptic ritual. This must be as urgent as before so long as permeable gloves are used. While absolute disinfection may be impossible, the number of pathogenic germs can undoubtedly be materially reduced by rigorous observance of antiseptic precautions.

EDITORIAL NOTES.

A New Style of Marching.

The French army is going to adopt a new style of marching. In this the knees are always to be bent, the feet lifted no higher than is necessary to clear the inequalities of the ground, and the advanced foot is to be placed flat on the ground, the step being made neither by the toe nor the heel. The body must lean forward, the chest and shoulders be low. It would seem that the style of march is to be a modified run, except from the fact that at no time are both feet off the ground simultaneously, a necessary condition of running. The tests of this form of marching have been exceedingly satisfactory, and the troops who have practiced it have covered long distances with great ease.

ITEMS AND NOTES.

STOERK, the laryngologist, of Vienna, is dead.

THE hospital ship *Missouri* has recently sailed from New York for Manila.

THE plague in India is causing great concern in British medical circles.

THE Baltimore Medical College will adopt a course of physical instruction in athletics.

A CEMETERY for domestic pets has been established in Paris, on a small island in the Seine.

FIRE destroyed St. Vincent's Hospital, Norfolk, Va., recently, and five patients lost their lives.

THE Ontario Medical Council building, Toronto, is for sale; the price being asked is $100,000.

ON account of some trouble the whole medical faculty at the University of Vermont has resigned.

A MARBLE bust of Emil Dubois Reymond has been placed in the Physiological Institute of Berlin.

THE plague continues without much change in all the places where it has been previously reported to exist.

THE tallest man in the world has just died. He was Harry Cooper, and was 8 feet 8 inches in height.

THE French Council of State has voted the sum of 300,000 francs for the defense of France against the plague.

DR. G. FRANK LYDSTON, of Chicago, was recently operated on in New York City for appendicitis. He has gone to Florida in hopes of recovering his health.

ON October 23 an imposing memorial was erected in Vienna to the memory of Dr. Mueller, who lost his life in the laboratory plague epidemic in that city.

THE Royal College of Surgeons of England will celebrate its centenary next year, and preparations are already being made looking forward to the event.

THE Russian Government will send two veterinary surgeons to Cape Town to study the preparation and mode of use of the vaccine employed in cattle plague.

DR. ACHILLES ROSE, of New York, has been granted the Silver Cross of the Knights of the Royal Order of the Saviour, by His Majesty, George I., King of the Hellenes.

IT is reported that a modified form of Haffkine's plague prophylactic has been produced which does not give rise to the illness and suffering hitherto accompanying inoculation.

THE Midwives' Bill, which was introduced by the Right Hon. J. B. Balfour, has been defeated in Parliament, having failed to pass its second reading. A large number of the members of the medical profession of Great Britain were dissatisfied with its provisions.

THE number of students in attendance at the University of Vienna during the past summer semester was 5770. Of these, 1598 were inscribed at the medical faculty, 1104 as ordinary students, 151 as extraordinary students, and 343 entered for special courses.

IT has been computed that one person in every 800 is blind to the x rays—that is to say, when looking through the fluoroscope they are utterly unable to observe the bones of the body, coins, or any other object which is clearly distinguishable by the ordinary observer.

THE Conference of Advocates of the Paris Court of Appeals has discussed and decided affirmatively the question: Does the publication in a book by a medical man of observations made upon a person treated in a hospital constitute a violation of professional secrecy?

AN interesting experiment is reported by Professor Kollmann, of Basle, who took a cast of a female skull dating from the stone age, and had a sculptor model the soft parts over it. The cast thus produced scarcely differs from the young women of Switzerland of the present day.

IT is reported that the government has engaged a physician for the employees of the Chicago post-office at a salary of $1700 per year. He will be at the main office to examine employees who report themselves sick. The government expects to more than make it up in salaries saved.

SURGEON-MAJOR-GENERAL S. A. LITHGOW, whose death is announced as having occurred recently at Melrose, was superintendent of the Royal Edinburgh Infirmary. He served through the Indian

mutiny and the Egyptian campaign with distinction, receiving medals and the decoration of C. B. At Edinburgh he was a highly popular and competent official.

THE medical college founded in 1883 by French Jesuits at Beyrout, Turkey, has recently been recognized officially as the peer of the French colleges, its diploma entitling the holder to practice anywhere in Turkey, France or its colonies. The *Journal de Médecine* protests most energetically against this order of things.

THE British Parliament has sanctioned a grant of $60,000 for a national physical laboratory, with an annual appropriation of $20,000, and Mr. R. F. Glaxebrook, now principal of University College, Liverpool, has been appointed director. The establishment of the laboratory is due to action on the part of the British Association.

A RECENT communication to the Paris Académie de Médecine asserts that countries in which the upper layers of the soil, the mud, and river beds contain a large proportion of lime are exempt from malaria, and suggests that malaria might possibly be banished from localities where it prevails by artificially incorporating lime with the superficial layers of the soil.

ACCORDING to the *Medical Record* a Philadelphia judge, in refusing a new trial in a suit for damages against the German Hospital, has decided that as a public charity, possessed of no funds except such as have been contributed by the charitably disposed for the furtherance of its philanthropic purposes, the diversion of its assets to compensate for injuries inflicted or occasioned by the wrongful acts of its agents or servants would be against all law and all equity.

DR. LEON JOUBERT has, says the *Philadelphia Medical Journal*, made several necropsies upon the bodies of bulls killed in the ring. He finds, in the majority of instances, that the sword of the matador enters the body of the animal upon the left side between the spinal column and the scapula, and cuts completely the large vessels at the base of the heart. The very acme of the art, however, is to introduce the sword just back of the occiput and sever the spinal cord; when this is adroitly accomplished the animal falls like a thunderbolt.

WE learn from the *Philadelphia Medical Journal* that an epidemic of suicides at present exists in Italy. In Milan, where work and wages are relatively abundant, there were, in the month of July, fifteen cases of suicide and as many abortive attempts. In Florence, dependent upon the winter visitor, there was, between May 1 and July 31, one suicide, either abortive or successful, per day. A similar

state of affairs is reported in Palermo and Naples; while it is said that the statistician is unable to keep pace with the suicides that occur in Rome.

ACCORDING to the *Medical News* of September 23, 1899, there is a likelihood of a breaking down of the quinine trust organized by German manufacturers. This trust had its culmination through a movement said to have been started recently by leading cinchona planters of Java for the purpose of keeping the raw material out of the hands of the syndicate of manufacturers. There seems, moreover, to be no good reason why the United States should not get both the cinchona bark and the sulphate of quinine direct from Java, and thus avoid the trust.

ONE of the latest stories about doctors is worth repeating, even though it is not true. Some college students—not medical of course—of expensive tastes find it necessary to resort to subterfuges that often tax human ingenuity. One of these is the "ten-per-cent doctor." This member of the medical fraternity is a played-out practitioner residing in the vicinity of the college, who makes a goodly sum out of students who have "blown in" their allowances long before their next is due. The student whose pocketbook has suddenly become depleted goes to his "medic," and for the consideration of ten per cent of the amount gets a receipt for "professional" services. This receipt is sent home, and usually a remittance for that amount is received in return. One student last year had two expensive "operations," thus realizing a neat sum.

ACCORDING to the *Philadelphia Medical Journal* the following table gives the results of the antirabic treatment at the Pasteur Institute:

Year.	Cases.	Deaths.	Per cent.
1886–87	2671	25	.94
1887–88	1770	14	.79
1888–89	1622	9	.55
1889–90	1830	7	.38
1890–91	1540	5	.32
1891–92	1559	4	.25
1892–93	1790	4	.22
1893–94	1648	6	.36
1894–95	1387	7	.50
1895–96	1520	5	.33
1896–97	1308	4	.30
1897–98	1521	6	.39
1898–99	1465	3	.20

Of the three deaths reported during the year 1898–99, one occurred fifteen days after the treatment and two during the treatment.

NEW PUBLICATIONS.

ZIEGLER'S PATHOLOGY.

The medical profession can congratulate Professor Ziegler that he did not yield to the temptation with which he appears to have been beset to substitute a compend of pathology for the classical text-book which has so long been such a valued addition to the physician's library. General pathology must always constitute the basis of the knowledge which should enable a physician to interpret correctly the symptoms of diseases that present themselves at the patient's bedside, and a superficial insight into these matters would be found exasperating and humiliating. The new edition of this work is marked by several alterations and additions. The number of illustrations has been increased by nearly one hundred, in the hope that the text may be rendered more easily understood. The most radical alterations are in chapters four and seven, dealing with retrograde disturbances of nutrition, infiltrations of the tissues, and tumors. The latter have been divided into three large groups — tumors of connective substances, epithelial tumors and teratoid tumors, and cysts. The definition of inflammation which the author gave in his last edition, and which he had previously announced in pamphlet form, is maintained in the present edition. Although arguments have been brought forward to combat this definition, the author has not felt called upon to modify his views. The author has presented the doctrine of infection and the efforts of the organism to antagonize the effects of such infection in a very lucid manner. It can only be predicted that Professor's Ziegler's classical work will maintain its undisputed claim to professional favor and popularity.

General Pathology, or the Science of the Causes, Nature, and Course of the Pathological Disturbances which Occur in the Living Subject. By Dr. Ernst Ziegler, Professor of Pathological Anatomy and of General Pathology at the University of Freiburg, in Breisgau. New York: William Wood & Company, 1899.

A COMPEND OF THE PRACTICE OF MEDICINE.

The Practice of Medicine, by Dr. Hughes, has passed into a sixth edition, which testifies to the esteem in which it is held. It is exceedingly popular with the medical student, and the present edition has been sufficiently enlarged to make it more useful to the practitioner without changing the arrangement which has made it hitherto so popular with the student. An additional section has been added on Mental Diseases. The work is not intended to take the place of larger manuals, but as a compromise between the compend and the text-book it will occupy a sphere of usefulness in many respects unique. Dr. Hughes's book has been published in an exceedingly attractive form, and will doubtless continue to enjoy the popularity merited by its intrinsic worth.

A Compend of the Practice of Medicine. By Daniel E. Hughes, M.D. Sixth Physicians' Edition, Thoroughly Revised and Enlarged. Including a Section on Mental Diseases and a Very Complete Section on Skin Diseases. Philadelphia: P. Blakiston's Son & Co., 1899.

THE HYGIENE OF TRANSMISSIBLE DISEASES.

The author of this work is already well known to the reading public by reason of the excellent manual of bacteriology with which practitioners and students of medicine will be thoroughly familiar. The purpose of the present work is to deal directly with that section of diseases which become preventable by reason of a knowledge of their

specific causes. The work more or less covers the field occupied by other manuals of science, but at the same time will fill a distinct pupose of its own in considering specific diseases and their special treatment. The author maintains a conservative attitude on disputed matters of opinion. On the transmissibility of tuberculosis he points out that by inattention to the proper prophylactic measures the sputum of tuberculous patients becomes the source of infection. The progress that is being made in this department of medicine will undoubtedly make an early demand for a second edition of this work a probability.

The Hygiene of Transmissible Diseases. Their Causation, Modes of Dissemination, and Methods of Prevention. By A. C. Abbott, M.D. Illustrated. Philadelphia: W. B. Saunders, 1899.

HANDY BOOK OF MEDICAL PROGRESS.

This is a somewhat unique book. The difficulty of keeping abreast of the times without the aid of some concentrated dictionary has called forth this little work. Many new terms and neologisms are employed long before they find their way into text books and ordinary dictionaries. This work includes the names and definitions of recent diseases, new test methods, drugs, and therapeutic and surgical suggestions. It furnishes the reader in a very convenient form with modern information relative to recent advances, and the authors are to be congratulated upon the successful way in which they have compiled their very useful handbook.

Handy Book of Medical Progress. A Lexicon of the Recent Advances in Medical Science. By Charles Warrenne Allen, M.D., and Jacob Sobel, M.D. One volume; post 8vo. Extra buckram, $1.50 net. New York: William Wood & Company.

PROGRESSIVE MEDICINE.

The newest volume of Progressive Medicine deals with diseases of the thorax, heart, lungs, blood-vessels, skin, and nervous system, and obstetrics. It will be noted that the references quoted indicate the late date which this summary of medicine includes in its pages. The opportunity the work affords the general practitioner for speedily and easily refreshing his memory with regard to the latest discoveries in medicine forms one of the indispensable features of this work.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D. Volume III, September, 1899: Diseases of the Thorax and its Viscera, Including the Heart, Lungs, and Blood-vessels, Diseases of the Skin, Diseases of the Nervous System Obstetrics. Philadelphia and New York: Lea Brothers & Co., 1899.

LEA'S SERIES OF POCKET TEXT-BOOKS.

The author of this work has compiled a very condensed yet comprehensive text-book on materia medica and therapeutics. The pages cover the physical properties, physiological action, therapeutics, and toxicology of each medicinal agent. There are also chapters on prescription writing, medical pharmacy, and practical anesthesia. The work is stripped of everything superfluous and forms one of those condensed manuals which so successfully meet the requirements of the present-day student of medicine.

Materia Medica, Therapeutics, Medical Pharmacy, Prescription Writing, and Medical Latin. A Manual for Students and Practitioners. By William Schlief, Ph.G., M.D. Series Edited by Bern B. Gallaudet, M.D. Philadelphia and New York: Lea Brothers & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Hints.

The following are taken from the *International Journal of Surgery* for September:

Don't spend half an hour in carefully sterilizing your hands, and then wipe them on any old towel that is lying around. Work with wet hands if you can't obtain a sterile towel.

An enlarged prostate often projects, as it were, into the bladder, thus increasing the length of the urethral canal. Hence an instrument must often be introduced farther than usual in order to reach the urine.

Look at the foot when a patient complains of enlargement of the femoral lymphatics. A suppurating ingrowing toe-nail or any other septic condition of the toe or foot is probably at fault. If this is properly attended to the glands will soon subside.

In general operative work it is always useful to have two kinds of artery forceps, pointed and blunt-jawed. The pointed artery forceps are most useful for vessels in and near the skin, as they crush less tissue. The blunt-jawed forceps permit more rapid and efficient hemostasis in the deeper tissues.

In the treatment of fractures of the long bones it is practically impossible to bring the broken surfaces end to end in perfect approximation. Our object is simply to accomplish this as nearly as possible, and in the lower limbs to secure such extension as will result in a bone of normal length.

In injuries of the skull requiring operation it is well to remember that the prognosis depends a good deal upon the region involved. Thus in a series of over 800 cases it was found that the mortality was one to sixty when the anterior brain was affected, whereas it was one to thirteen in injuries of the central and posterior regions, and one to four and a half in those situated at the base.

Some Important Points Regarding Perfection of Asepsis.

Carl Beck, in the *Medical Record* of October 9, 1899, lays down the following maxims for the further perfection of asepsis in operating:

Aseptic gloves should be worn by the operating surgeon at least

during the skin incision. The assistant who passes the instruments and the one who attends to the wound itself wear gloves throughout the whole operation.

After incision the wound margins of the skin are covered with sterile napkins, which are fastened to the wound surface underneath the skin margins with miniature forceps, so that the skin wound is not touched at all during the subsequent manipulations.

The knife used for the skin incision must not be used for further incisions. The operation should be performed as rapidly as possible.

For uniting the wound margins of the skin the subcutaneous method should be preferred.

Forcible manipulations, especially blunt operating, should be avoided.

The surgeon and assistants should wear sterilized suits or gowns. Their heads must be covered with sterilized caps, because in bending over the field of operation it often happens that the heads of the surgeon and his assistant come in contact, whereby infectious material might be introduced into the wound.

Long beards are entirely unsurgical.

If a surgeon should suffer from rhinitis, tonsillitis, etc., he should use the most minute local precautions, or would better omit operating until recovery. It is self-understood that a surgeon should regard it as a crime to operate so long as he suffers even from a slight furuncle on his hand.

A Case of Retention of Urine Caused by Retained Menstrual Fluid.

O. Smithson (*Lancet*, Sept. 9, 1899) reports a case of retention of urine caused by retained menstrual fluid in a girl aged sixteen years. On examining the patient he found the abdomen greatly swollen, and could feel the bladder almost as high as the umbilicus. A draught of tincture of hyoscyamus and bicarbonate of potassium was administered and the girl put into a hot bath. This proving ineffectual, he passed a catheter and drew off a large quantity of urine, the pain being at once relieved. Whilst passing the catheter he felt a tense, fluctuating swelling projecting between the labia. The symptoms returned shortly afterwards, and necessitated the use of the catheter at regular intervals. Finding no cause for the retention, the author made another and more careful examination, and then found that the swelling was an imperforate hymen bulging forward between the labia. With strict antiseptic precautions he incised the hymen, which was very thick and leathery, and let out a quantity of menstrual fluid of very dark color and extremely viscid in character. After this

there was no further trouble, and the patient is now in excellent health. The retention was evidently caused by the great pressure of the menstrual fluid. The patient has several sisters older than herself, who all started menstruating when about thirteen years old, so that in all probability the menstrual fluid had been collecting for some considerable time.

Tubercular Peritonitis.

Frederick S. Dennis (*Philadelphia Medical Journal*, Sept. 30, 1899) says, in regard to operating upon cases of tubercular peritonitis, that the operation should be done within ten or twelve hours after the disease is ushered in, provided the diagnosis is certain and the proper facilities are present. This rule is imperative if vomiting and tympanites are present, and the symptoms are increasing or only modified. We should wait if the peritonitis is circumscribed and signs of improvement are present; but remove the appendix in the interval, if there has been more than one attack, and in exceptional cases after the first attack. With reference to the management of the appendix, this should be removed if it is accessible, and if it is contained in an abscess cavity whose walls are rigid. The appendix should never be sought after when the patient's condition forbids any protracted search. We should do as little as possible when the cæcum is gangrenous, but remove the appendix and wash out the pus cavity with hydrogen dioxide, followed by saline solution, and pack the cavity with sterilized gauze. When pus is free within the peritoneal cavity free opening should be made, the cavity washed out with hydrogen dioxide, followed by a copious saline solution, and finally packed with sterilized gauze. When general peritonitis is present there is a great diversity of opinion as to whether an operation is justifiable under any circumstances, and the decision to operate must be left to the judgment of the surgeon.

Fissure of the Anus.

Fissure of the anus is, as every one knows (*Medical Press*, Sept. 20, 1899), an affection as troublesome as it is painful. Of the different remedies recommended, forcible dilatation of the sphincter is the most radical and perhaps the most effectual. But it is not easy to get the patient to submit to the operation outside of hospital practice. Dr. Boas recommends a much simpler treatment, which he affirms to have succeeded with him ten times out of twelve. The principle of the treatment being the complete immobilization of the anal region, he puts the patient to bed for one week, allowing for all

nourishment milk and light pottage. At the same time he orders ten drops of laudanum to be given three times a day, so as to produce absolute constipation. If the fissure can be brought to view he powders it with iodoform, calomel, etc., but without touching it with any instrument or dressing. Any antiseptic washing would be more hurtful than useful. At the end of eight days he administers a full dose of castor oil, recommending the patient to restrain himself from defecation until he felt that the contents of the intestine had become completely liquid. The treatment failed only where complete retention of the feces could not be obtained.

Congenital Absence of the Fibula.

H. L. Taylor (*Pediatrics*, Oct. 1, 1899) reports a case in a boy aged twelve years. The total shortening of the left leg is about five inches, of which one and a half is above and three and a half below the knee. The boy has good use of the hip and knee, but the foot is stiff and everted, and the fourth and fifth toes with their metatarsal bones are entirely wanting.

The writer says that there is not much to be done for these cases surgically, except to correct the position of the foot and the bowing of the tibia, so far as possible. These patients usually walk well with a high patten, though they frequently require to have the ankle or leg supported by an apparatus.

MEDICINE.

Dust in the Etiology of Tuberculosis.

Max Girsdansky (*New York Medical Journal*, Sept. 9, 1899) says that if sixty per cent of all men die of tuberculosis (Biggs), and if the main, almost the only, cause of pulmonary tuberculosis is bacilli-laden dust, and the broom by far the main cause for such dust, the broom is evidently responsible for more deaths than the sword ever was.

The inevitable consequences of the above are:

1. That the broom, far from serving any hygienic purpose, is the cause of the maintenance of organic dust in the atmosphere of the large cities of the world, and as such is the most important cause of the existence and spread of tuberculosis, probably also of various other infectious diseases, and should therefore be abolished.

2. That the carpet is an unhygienic article serving as a fine breeding ground for vegetable parasites, necessitating the use of the broom and the duster, and thereby becoming a reason for the existence of organic dust.

3. That the only proper and safe way of procuring cleanliness of the floors and streets of our large cities is by the free use of water as a cleansing agent, in the shape of showers, sprinkling wagons, hose, mops, etc.

4. That all floors and floor coverings of the home and the street ought to be so constructed as to facilitate the free use of water in the shape of showers or mops as a means of procuring cleanliness.

The Primary Lesion of Tuberculosis: How Located.

W. H. Weaver (*New York Medical Journal*, Oct. 7, 1899) states that the infection comes through food or moist germs inhaled and swallowed, and possibly through infection of tonsillar tissue.

In the great majority of cases the infection occurs in the posterior portion of the lung apex, that being the most vulnerable point, as a direct result of the discharge of infected chyle into the vena cava.

Should that portion of the lung apex be healthy, and not a suitable nidus for the germs, they may pass on with the current of blood to find lodgment in some other area, unless the blood has exerted its bactericidal power over them, when they may be removed by the action of the phagocytes (Klebs).

The theory of Cornet has not produced the results expected in the prophylaxis of tuberculosis. Then why consider such a rare possibility, when we know that there is a stream of bacilli constantly flowing into the blood current through the lacteals capable of producing the infection in the lungs?

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

The Morphology of the Blood in Diphtheria.

Hase, of St. Petersburg, has carried on a considerable research along this line under the direction of von Uskow (*Internationales Centralblatt für Laryngologie*, etc.). The writer gives many tables of blood-corpuscle counts and percentage estimates of the relations of one sort to another. Special attention was paid to the white corpuscles, which according to von Uskow's method of division were classified as young, mature, and overmature. The material for examination was furnished by twenty-nine children in the Elizabeth Hospital of St. Petersburg. The results of this very painstaking work the author has shown in the following conclusions:

1. The injection of serum in healthy persons produces a general increase of white blood-corpuscles; a decrease of the percentage of young and mature, with an increase of the overmature.

2. In diphtheritic patients the serum injection in the majority of cases did not have an analogous action.

3. The number of the leucocytes early in the disease does not determine the severity of the attack, and is not of value for the prognosis.

4. Only repeated examination of the morphological elements of the blood can give light as to the prognosis.

5. With improvement of the patient the general count of leucocytes is diminished; the young elements increase, the mature decrease. With an exacerbation of the symptoms these relations are reversed.

6. The decrease in the general count of the white corpuscles and increase of the young are not dependent on the local symptoms alone.

7. The lighter the attack, the earlier the morphological elements of the blood assume their normal relationship.

THERAPEUTICS.

Cacodylic Medication.

Danlos (*Revue de Thérapeutique*, July 1, 1899), having ascertained the almost complete innocuousness of cacodylic acid, prescribes it in large doses for the treatment of cutaneous diseases. For internal use he recommends the following formula:

℞	Sodium cacodylate	2 grammes.
	Dykum	20 grammes.
	Simple syrup	20 grammes.
	Distilled water	60 grammes.
	Essence of peppermint	2 drops.

One teaspoonful represents ten centigrammes (1½ grains) of sodium cacodylate.

Danlos also uses a pill of sodium cacodylate ten centigrammes (1½ grains) and extract of gentian q. s. For hypodermic use he recommends:

℞	Morphine muriate	0.025 grammes.
	Cocaine muriate	0.10 grammes.
	Sodium chloride	0.20 grammes.
	Sodium cacodylate	5 grammes.
	Carbolic acid (five-per-cent sol.)	2 drops.
	Distilled water	q. s. ad 100 Cc.

Danlos has given internally to his male patients every day during several consecutive weeks from 40 to 60 centigrammes (6 to 10 grains)

of cacodylate, and 30 centigrammes (5 grains) to females. For hypodermic use he does not go beyond 40 centigrammes a day, which dose, however, may be continued for two consecutive months.

In this manner we may, without any danger, give our patients tremendous doses of arsenic. Cacodylic acid and cacodylate of soda are very soluble, contain fifty per cent of arsenic, and are possessed of a low degree of toxicity. Moreover, in subcutaneous injections they give rise to practically no pain.

The only untoward results of their administration by way of the mouth are a garlicky taint of the breath, most offensive stools, and with large doses sometimes bowel colic and exfoliating dermatitis. In sixty cases of psoriasis results have been most encouraging, though relapses are not scarce, and new patches even occur during the course of treatment, so that cacodylic acid cannot be considered as a specific in psoriasis.

Hyoscine Hydrobromate.

Hyoscine hydrobromate has been tried by A. C. Rendle, of Madras, India (*British Medical Journal*, No. 2013, 1899), on a bad case of chorea in a youth of sixteen years. He was thin and anemic; the temperature was slightly raised; the tongue was dry and coated with a brownish fur; the pulse was weak and the respirations irregular; there were constant involuntary movements and twitchings of all parts of the body. He had sores on various parts of his body, due to injuries inflicted from his involuntary movements. Albumin was present in his urine. Potassium bromide, chloral hydrate, and increasing doses of arsenic gave no relief. He was very restless at night, and morphine eased him slightly. Hyoscine hydrobromate in doses of $\frac{1}{200}$ of a grain was injected hypodermically twice a day. On the day following the first injection there was marked improvement in the choreal movements. The dose was increased to $\frac{1}{100}$ of a grain and given three times a day. In a week the movements had almost entirely ceased. The hydrobromate was then discontinued and the arsenic treatment resumed. The patient made an excellent recovery.

Chorea is an extremely fatal disease in India.

Cocaine in Vomiting of Pregnancy.

Zvonnikov (*Vratch*, No. 15, 1899; *Revue de Thérapeutique*, July, 1899), acting upon the theory that uncontrollable vomiting of pregnancy is due to gastric irritation of a reflex nature originating in the uterine cavity, whence the stimulus is transmitted by way of the sympathetic system, recommends the local application of cocaine hydrochlorate.

The first patient to receive the benefit of this method was a primipara, aged twenty-one, who during the third month of gestation became affected with incoercible vomiting, and was then in such a precarious condition that she could not retain the slightest amount of food, while the vomiting spells were often accompanied with fainting, all previous treatment proving a total failure. At this juncture the author, being called upon for the first time, introduced into the cervix at a depth of four cubic centimeters (about 1½ inches) a pledget of absorbent cotton saturated with a twenty-per-cent solution of cocaine hydrochlorate, which was left *in situ* during three minutes. That same day patient vomited only three times, and was able to retain a soft-boiled egg and some beef broth. Within twenty-four hours the local application was repeated and patient entirely cured.

On the strength of this case Zvonnikov applied the treatment in seventy-seven other cases, and always with identical results. The final outcome was always the same: in some cases one application was enough, sometimes two or three were required, but never more.

The Action of Quinine on Malarial Parasites.

The action of a 1:1500 solution of quinine on the parasites in the blood of a patient with quartan fever has recently been made by Le Monaco (*Lo Sperimentale*), and he has found that these parasites have been much altered in their shape. The pigment granules were seen in lively motion, and the parasites abandoned the cells, but remained in close proximity. He deducts from his observations that the parasite is driven out of the corpuscle by quinine, and that therefore the best time to administer it is during the fever-free intervals, at which time only young parasites circulate in the blood.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Thirty Years' Progress in Rhinology.

In an able address with the above title Mr. E. Cresswell Baber opened the work of the Section for Laryngology and Otology at the last meeting of the British Medical Association (*Journal of Laryngology*, September, 1899). The dates given below are gathered from this address, and are of interest as marking special features in the rapid progress of rhinological work.

Just thirty years ago Wilhelm Meyer, of Copenhagen, brought to England his eventful discovery of adenoid vegetations, and read a

paper on the subject before the Royal Medical and Chirurgical Society in London on November 23, 1869. He had previously published an article in his own tongue (1868), and subsequently wrote a long monograph in German for the *Archiv f. Ohrenheilkunde* of 1873. Though Meyer's article forms a landmark in rhinology it did not attract immediate attention, and it was not till some years later that original articles began to appear on the subject in England.

About ten years earlier, or in 1859, Czermak had paved the way for Meyer's discovery by the invention of the art of posterior rhinoscopy. Voltolini, whose first work was published in 1861, began to work at this subject soon after Czermak, and was first to insist on the importance of the palate hook.

Anterior rhinoscopy, though of much older date, cannot be said to have been much cultivated in modern times till 1859, when Markusovsky invented the speculum bearing his name. Thudichum of London, and Duplay of Paris, both published accounts of their specula in 1868. Frankel's speculum dates from 1872.

In 1882 the study of nasal diseases generally received great impetus from the well known work of Zuckerkandl on the normal and pathological anatomy of the nose and its accessory cavities. Perhaps the next most noticeable event was the work of Hack, of Freiburg, on reflex nasal neuroses, whose brochure on the subject was published in 1881. The abundant substratum of truth furnished by him, and sifted by later observers, has been a valuable contribution. Hack's theories led to an extended use of the galvanocautery, invented some years before by Middledorpf and extensively used by Voltolini. Happily at present it is not used so promiscuously as was once the case.

Shortly after this rhinology underwent practically a revolution through the introduction of cocaine. In 1884 Jellinek published an article on its use in the throat and nose.

All these valuable acquisitions improving methods of examination and treatment of nasal diseases have led to a new phase of rhinology, namely, the study and treatment of diseases of the accessory cavities, a line of work in which important and startling advances are just now taking place.

Foreign Bodies in the Nose.

There is perhaps no commonplace of medical practice which gives rise to more perplexity and misunderstanding than the diagnosis and treatment of foreign bodies in the noses of children. A short article on this subject in the *Journal de Clinique et de Thérapeutique Infantiles* of December 1, 1898, by M. Felizet, is therefore of some practical interest. His observations are founded on an experience of thirty-

one cases. The bodies dislodged were of great variety, including dried peas and beans, cherry-stones, slate-pencil, pellets of paper and wool, etc. In all the cases the removal was effected by means of douching the free nasal meatus, either by the hydrostatic method or with a syringe, the injected fluid (tepid water) returning by the opposite nostril and driving the foreign body before it. The pressure of fluid employed in this proceeding is regulated by the resistance encountered or expected, but in all cases it is, at the outset, gentle and applied slowly, in order to avoid interference with the action of the velum palati or sudden injection into the Eustachian tube and tympanum. In twenty-six of the cases noted this method alone sufficed; in five the impediment had to be further helped out of the nostril with forceps or curette. This use of the douche is by no means new; it is noteworthy, nevertheless, both as an aid in the diagnosis and as by far the gentlest mode of treatment in this class of cases. The facts which we have quoted should go far to prove its general efficiency and to obviate, at all events in the first instance, those more direct instrumental measures commonly advised in surgical text-books.—*Lancet.*

Relation of Adenoids to Diseases of the Ear.

R. Lucas (*Internationales Centralblatt für Laryngologie*, No. 9, vol. xv) deals with this subject at length in a recent valuable Parisian thesis. Adenoid vegetations maintain a persistent inflammatory condition, which very easily spreads to neighboring organs. They also give origin to occlusion of the openings of the Eustachian tubes and thereby disturb the normal air-pressure in the middle ear. From these causes otitis arises: (1) through the spreading of an inflammatory process; (2) through mechanical obstruction. These forms of otitis are especially severe in small children, in whom they frequently lead to deaf-mutism. In such cases the operation for removal of the adenoid vegetations must be undertaken without delay.

An Early Sign of Hereditary Syphilis in Infancy.

Carralero, of Madrid (*Internat. Centralblatt für Laryngol.*, etc., vol. xv, No. 8), has written concerning the coryza of infants at the breast as an early symptom of hereditary syphilis, and the differentiation of this from other forms of rhinitis in infancy. The writer regards the coryza as one of the most constant symptoms—in the majority of cases the first to appear, and in some cases the only early manifestation of hereditary syphilis. The diagnosis is difficult if no other symptoms are present, however; with any obstinate purulent rhinitis this cause must be considered and general specific treatment inaugurated.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Report of a Case of Acromegaly, with Special Reference to the Eye Symptoms.

Dr. William M. Leszynsky (*Philadelphia Medical Journal*, Oct. 7, 1899) reports a case of acromegaly with marked ocular symptoms occurring in a policeman, aged thirty-six. The patient stated that about a year before he consulted the doctor his sight became affected. There was difficulty in reading; the letters seemed blurred. This gradually became worse. During the last three months he has been unable to read more than two or three lines, and he was therefore compelled to give up reading altogether. With the left eye he sees only about one-third of objects, and recently objects appear indistinct when he looks toward the left. For the past two months he complained of a dull frontal and bitemporal pain, which was worse in the morning and more or less constant during the day.

The pupils were of equal size, 3.5 millimeters, and reacted very slowly to light and shade, but were normal in convergence. Hemianoptic pupilary inaction was demonstrable in the left eye. The vision of each eye equaled 20–15, which glasses failed to improve. With the left eye he read the letters toward the right side of the card only. Stereoscopic vision was materially impaired, the image in the left eye being suppressed. With strong effort at convergence he succeeded for a moment in fusing images at four inches. The ocular muscles acted normally. He read Jaeger No. 1 at twelve inches with + 1.50 D. There was no central color scotoma. In the left eye there was incomplete temporal hemianopsia for white. There was marked concentric contraction and temporal hemianopsia for red, and almost complete loss for green. The field of vision in the right eye was normal, while the fields for red and green showed a contraction on the nasal side and a temporal hemianoptic defect.

The author mentions that it is well known that a variety of eye symptoms may occur as an accompaniment of acromegaly, but the most important are those due to involvement of the optic nerves. Vision is impaired in many cases. The symptoms are usually early and take a progressive course. In some cases they appear among the later manifestations of the disease. Bitemporal or one-sided temporal hemianopsia for form and color is frequently observed. This is due to an overgrowth or neoplasm involving the hypophysis, which presses on the chiasm, and also to bony changes in the optic foramina. In

this manner the arterial supply of the nerve and eyeball is also disturbed, ending frequently in atrophy of the optic nerves.

Among other eye symptoms that occur in this affection are exophthalmus, probably from proliferation of adipose tissue back of the bulb, and oculomotor paralysis from pressure on the third nerve nucleus.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

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Puerperal Eclampsia.

Paul Parisot (*Revue Internationale de Médecine et de Chirurgie*, March 25, 1899; quoted in *Revue de Thérapeutique*, July, 1899) says that prophylactic treatment is instituted in this condition to prevent if possible the formation of toxins in the system, or to favor their elimination through the main emunctories—the skin, the intestinal tract, the kidneys.

Exclusive milk diet readily meets the various indications, because giving rise to least intestinal fermentation, while it furthers diuretic activity. Little confidence should be placed in the use of insoluble antiseptics such as salol, naphthol, benzonaphthol, etc.

According to Descheemacker saccharin prescribed at the rate of one to two grammes a day (15 to 30 grains) should prove a most efficient intestinal antiseptic. Cathartics, however, are more efficient than the latter class of medicines.

Diuretic drinks, sudorifics, warm baths, and vapor baths increase the activity of cutaneous and urinary excretion, while the inhalation of oxygen by furthering metabolic changes immunizes the danger from autointoxication.

Bleeding is also recommended to forestall impending eclamptic seizures, and should nervous complications occur immediate recourse should be had to chloral hydrate enemata.

French accoucheurs have a tendency to neglect artificial delivery for the prevention of threatened eclampsia, whereas Parisot recommends immediate extraction of the uterine contents. Should an actual attack take place, the use of milk should be continued and oxygen inhaled, while drastic purgatives (especially the one advocated by Tarnier—one drop of croton oil in a tablespoonful of castor oil) should not be neglected. Recourse should also be had to copious repeated bleeding—300 to 500 grammes (one-half to one pint), coupled with the injection of one to two pints of normal saline solution.

Having counteracted autointoxication, nervous excitability should be conquered with chloral enemata or chloroform inhalations. Foreign authorities advocate very large doses of morphine, also the exhibition of tinctura veratrum viride in ten-drop doses every hour during the seizure.

Postpartum eclampsia should be treated according to the same plan. With no albumin present we may fear an impending attack in patients complaining of protracted headache, evil forebodings, unjustifiable terrors, etc.

The Douche.

F. A. Stahl (*Journal of the American Medical Association*, Sept. 30, 1899) says that the douche is a benefit and to be recommended, both as a prophylactic and as a preventive measure. It cleans, it stimulates; to the genital economy it is bactericidal, for though it may not destroy, it washes away multitudes of microorganisms; the patient feels refreshed and strengthened after it; it is a splendid antipyretic.

Less injury has been done by the douche than by the non-douche principle. Further, ophthalmia neonatorum is surely discouraged by the douche.

Repetition, temperature, force, and quantity of the douche must be regulated by the demands of the problem.

Perforating wounds of the cheek and lip, continually bathed in the secretions of the mouth, and mammary abscesses—these, like the wounds of labor, will heal and will recover; but neither so pleasantly, so perfectly, so promptly, nor with so little systemic reaction as when the douche is intelligently applied. Its beneficial efficacy in the early labor, the abortion, is a fact. Contrary argument would prove but a boomerang.

The dangers of the douche have been exaggerated. The extreme danger of possible air emboli in practice bears the same relation to its reported theoretical possibility as is so correctly suggested in the figure of exaggeration, viz., as the mole-hill to the mountain.

Perineovaginal Incisions for Threatened Rupture of the Perineum.

These incisions, says L. A. Fritsche in the *Northwestern Lancet* of September 15, 1899, are indicated:

1. In stenosis of the vagina.

2. In rigidity of the muscular structures of the pelvic outlet in old primiparæ.

3. In the high forceps or version in primiparæ, when the presenting

part has not had time to dilate the muscular ring of the pelvic outlet and delivery is demanded.

4. In the occipitoposterior position, when the occiput rotates into the sacral cavity.

5. In narrowing of the pelvic outlet, which we have in the generally contracted, funnel-shaped, or kyphotic pelvis, and when the transverse diameter is not narrower than eight centimeters.

The writer has found that the greatest value of these incisions is in the latter class, where we have not only the resistance of the soft parts to contend with but the bony structures as well.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Diseases of the Nails, with Special Reference to Their Significance as Symptoms.

In a paper read before the Dermatological Society of Great Britain and Ireland, May 25, 1899, Jonathan Hutchinson, F.R.S., gives expression to the following views:

"It is a well known fact that any severe illness is liable to leave transverse furrows across the nails; that these furrows will always be found to be more marked in the thumb-nail than in any other, the forefinger next frequently, and that they shade off as you pass from the thumb to the little finger; that in some cases the arrest of nutrition, which is the cause of this temporary change in the nail, produces not a depression, but a white line in the nail. In the cases in which the vertical lines are produced some disturbance of nutrition appears to take place at the root of the nail, in connection with the general health.

"A great many cases of psoriasis occur as psoriasis of the nails without any lesion of the body. There are cases in which the nail becomes loose in its bed in healthy persons, many nails being affected at the same time, without any other obvious cause than that very often there is psoriasis in some relative. In the condition of the nail which goes with eczema there is generally a longitudinal furrowing of the nails, or the development of little indentations as if the nail had been pin-pricked. Irregularity of the surface of the nail, beginning at its root, is typical of all eczematous conditions; loosening of the nail, beginning at its free edge, is characteristic of psoriasis conditions.

"In acromegaly, in which the digits themselves are very much

enlarged, it happens that the nails do not enlarge at all; whereas in the false form of acromegaly, which occurs in connection with thoracic disease, either chronic or obstructive, in which the digits become enlarged and the fingers clubbed, the nails become of enormous size.

"A condition of great thickening and hardening of the nails sometimes occurs in connection with psoriasis and sometimes in connection with syphilis."

Inflammation of Lip.

To the meeting of the Dermatological Society of London, July 12, 1899, Mr. Malcolm Morris (*British Journal of Dermatology*, August, 1899) sent a case of desquamating and suppurating superficial inflammation of the lower lip in a woman aged forty. This condition had lasted for over six months, and had been a source of great disfigurement and discomfort to the patient. When brought recently for treatment, it was observed that she suffered severely from pyorrhœa alveolaris (Riggs's disease). Most of the teeth had been extracted, and the gums were in a much healthier condition, with the result that the lip had improved very much, and slight desquamation of the epithelium was all that could be observed. Much atrophy of the mucous and submucous tissues had resulted. Dr. Galloway said that he considered many cases of chronic inflammation with desquamation of the lip depended on purulent conditions of the gums, and this should always receive the first attention during the treatment of these cases.

Treatment of Erysipelas.

Gallois (*Riforma Medica*, May, 1899) recommends the application to the affected portion of the skin of an antiseptic gelatin. This mixture is to be applied with a soft brush, and is made from the following formula:

℞	Gelose	1 gramme.
	Corrosive sublimate	0.1 gramme.
	Tartaric acid	0.1 gramme.
	Distilled water	100 Cc.

Sig.: Apply externally.

Gelose is the active principle obtained from agar-agar food gelatin. (It would be more practical to substitute in this country a somewhat larger amount of a fine quality of cooking gelatin for the gelose.)

THE MEDICAL AGE

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ORIGINAL CONTRIBUTIONS.

CONCERNING MALARIA.

BY W. THORNTON PARKER, M D, WESTBORO, MASS.,

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In the report of Colonel Waring, on the sanitation of Havana (*Forum*, January, 1899), in speaking of the tropical malarial fever, he states that it "is not the indefinite, elusive *malaise* to which we are wont to charge the languors that too often result from our own indiscretions and excesses. It is the malignant malarial fever, which during our civil war prostrated 13,673 men, of whom 3370 (23.91 per cent) died, and which killed 7000 Spaniards in Cuba in 1897. It is a disease from which there is no well-defined immunity. The poison is eliminated from the system very slowly, and attacks are *likely to recur after any derangement of the vital functions.* Although the immediate cause of malarial fever has not been clearly recognized, the correction of the remote cause is followed by the sure and speedy disappearance of the disease. This remedy consists in lowering the level of the ground water, in minimizing its movement under tidal influence, in preventing the alternate flooding and exposure of organic deposits, and in the alternate invasion of the latter, by fresh and salt water."

When we consider the malarial fevers of western Kansas, southern and southeastern Colorado, the Texas Panhandle and the region of the Llano Estacado, the great territory of New Mexico, Arizona, etc., we find just the opposite climatic conditions: desert lands, great rolling prairies, dry and hot elevations up to thousands of feet—an atmosphere aseptic. Where do the germs come from? Are they carried in the atmosphere hundreds of miles, and then introduced into the system? Shall we revive the Salisbury theory which attracted so

much attention back in the sixties? Or is there some reason more obvious and more readily accepted by those who have had the experience of the climates of the South as well as of the West, and, we may add, the *North!* For even in the Berkshire Hills we find the disease, prostrating but less virulent than that about the Chagres River, or in fever-infected Havana. The infecting ability of flies and mosquitoes may be the method by which we will arrive at a solution of the problem concerning malaria in the high dry lands of our great West. There can be no doubt that these insects are capable of transferring disease germs. We know how easily worms travel from orchard to orchard, falling on the tops of carriages, and being brushed onto trees miles distant — how birds convey from flower to flower the needed incentive to development. Nature has certainly a wonderful method of carrying out her laws, and she is often found to be the slave of undesirable methods working much of ill. The gross carelessness and filthy habits of one family should receive check from the more intelligent and painstaking members of a community. We are too apt to consider it unwarranted interference, when nuisances are abated. Violation of the laws of hygiene is sure to bring suffering more or less near where the wrong originated. The great remedy for most of these ills is the education of the members of every community in matters sanitary.

It is a long journey from sunny Italy to the deep cañons of New Mexico, but in each sunny land I have suffered with fever, as well as along the Mississippi River and the Middle West. We cannot regard all this fever as the result of broken laws of health; sometimes it must seem to us as if nature had failed to attend to her own house-cleaning. We may faithfully do our part toward cleansing harbors and disposing of the sewage of towns and cities, but to accomplish a very great work in this direction would require international cooperation and an instruction of all peoples in sanitary knowledge to an extent passing the bounds of possibility.

If, then, prevention is not practicable, what are our best remedies for this wide-spread evil which lurks in so many homes of mankind and is to a large extent unconquerable?

A vast amount of valuable professional information is hidden away in the volumes of our consular reports. The State Department is very ready to assist medical men who desire to make investigations concerning European matters medical. Consul-General Mason, Frankfort, Germany, calls attention to the fact that the German Colonial Society has taken up with great interest the suggestions of Professor Koch concerning the necessity for more effective measures for mastering the malarial diseases which now so seriously restrict the settlement

of the colonies of Africa and the East. Professor Koch has been making a study of the Campagna fevers in the hospitals in Rome, and he has declared that the malarial fevers of Italy are identical in cause and general character with those of East Africa. Some of the most fertile districts of Italy are, like the whole southeastern coast of Corsica and Sardinia, practically uninhabitable on account of malarial disease.

Among the other interesting deductions of Professor Koch is his freely expressed opinion that the indiscriminate use of quinine as a prophylactic in malarial countries is attended with great danger, and is in many cases the indirect cause of the pernicious "black-water" fever, one of the most virulent forms of malarial disease. The very general practice among persons coming from temperate to tropical latitudes of saturating their systems with quinine, taken in regular and often excessive doses, is vigorously condemned for two reasons: first, because it seriously weakens the action of the heart, and secondly, because the system, having become inured to the drug, fails to respond to quinine treatment in case of actual sickness. The efficiency of the drug having been exhausted as a preventive, it has no longer any important value as a remedy; and experience shows that a person debilitated by the excessive use of quinine may take malarial fever and die of it like any one else.

Another fact noticed and mentioned by Professor Koch during his studies in Africa and India is that women withstand exposure to malarial climates far better than men. During the appalling mortality on the Gold Coast within the past four years, says the report, there was hardly a death among the women living out there, while every kind of man was dying—men new to the tropics, men born in them, men who had been accustomed to them for years, even men who had battled with the savages of West Africa for upwards of ten years.

I have noticed this same immunity of women to malarial infection at government stations in the Northwest and at military reservations in Kansas, New Mexico, Texas, and the Indian Territory. I always attributed this immunity to the fact that men work harder and become exhausted with their efforts, and oftentimes cannot procure needed food. The women remain indoors and escape exposure to the fierce sunshine and to the early morning and evening atmosphere, which is supposed to be loaded with the death-dealing fever germs. I remember a visit which I made to the Rio Miembres in 1867, with two troopers as escort riding through the Apache Indians, bringing to the little Mexican settlement some much-needed quinine. Almost every man was wrapped up in his blanket, shivering before his door with

malarial poisoning. The women and children were doing most of the work. It was a pitiful sight.

Speaking of Havana, Colonel Waring said: "It is a city set upon a hill—a dunghill! The people of Havana have been living *over* and in the midst of filth for so long, and their unsanitary habits have become so firmly fixed, that no sudden repentance and conversion to a clean heart and a right spirit need be expected. It is more than likely, indeed, that they may be disposed to resent any attempt to regulate, or even criticize, their domestic customs." My good friend and former neighbor, Colonel Waring, is perhaps unconsciously giving us Unitarian doctrines; let us hope that when the cleanly way is made known and made possible these people who have suffered so long will gladly welcome a system of sanitary engineering which will be the means of not only making them more comfortable, but what is of much greater importance, notably diminish the death-rate. Sanitary science rightly administered is a force of value for the development of commercial interests, but how difficult it is to inculcate this truth.

Apropos of this subject of malaria, *Harper's Weekly* of April 29, 1899, contains two interesting articles concerning Porto Rico and Havana. In the former, speaking of the diseases of Porto Rico, it is stated that "anemic malaria is a constant skeleton seen weakly shambling in a thin shroud of dead-white skin. Great numbers die from this manifestation of chronic malarial poisoning." Of the state of affairs sanitary in Havana it declares that "there may be yellow fever in Havana this year, as there is every year, and indeed as there is all the time. . . . There may be an epidemic of unusual violence this year, because of so many deaths from hunger and disease during the reconcentrado days—but it does not seem probable. There will be a great deal of sickness, but it is unreasonable to suppose that all the work of street-cleaning, disinfecting the streets and houses, caring for the sick and the hungry, purifying the harbors and sewers, will not have a tremendously good effect upon the health of the town."

Dr. Thompson contributes to the *International Annual* some very interesting items concerning malarial fevers. He refers to the malarial parasite as observed in the paludal fevers of pernicious type in British Guiana, and reported by Dr. Thin, of London: "In comatose cases he found large numbers of parasites in the cerebral capillaries and small veins—as is usual in such cases."

The epidemic malarial fever of Assam, otherwise known as Kala-azar, is described by Dr. Rogers, of the Indian Medical Service, who regards it as directly infectious from person to person, as well as by soil transmission. He succeeded in checking an epidemic among the tea-garden lines by removal and segregation of the natives.

An epidemic of malaria which developed on a ship leaving Glasgow August 4, 1897, for Calcutta is reported by Dr. Rees. The epidemic began nine days after leaving Colombo.

Dr. Nammach reports concerning the differential diagnosis of Cuban malarial fevers and commends the old treatment of opium one grain, capsicum one grain, and quinine ten grains, for the obstinate estivo-autumnal forms. One patient recovered after five days of malarial coma. He also reports a number of cases of mixed infection, malaria complicating typhoid fever—typho-malarial fever—similar in many respects to our "mountain fever."

Dr. Manson, at the meeting of the British Medical Association (July, 1898), discussed the "Rôle of the Mosquito in the Evolution of the Malarial Parasite." He, with Dr. Ross, found that the mosquito ingests the parasite with human blood; the latter witnessed the flagellation within the mosquito's stomach, and in the muscular lining of this organ he found oval pigmented bodies.

Dr. Ewing reports the results of 800 blood examinations in malarial fevers treated on the return of patients from the Cuban war, and Dr. Thompson reports a number of cases of mixed infection — malaria complicating typhoid fever — in which the plasmodium was demonstrated and the Widal serum reaction and other typical symptoms of enteric fever were present. In the majority of such cases the plasmodium is quiescent until convalescence from the typhoid fever begins, but in not a few instances the course of the latter was interrupted by malarial paroxysms.

Dr. Lesser gives his treatment of Cuban malarias as follows: An initial saline cathartic was succeeded by gelsemium for the headache, and small doses of quinine with hydrochloric acid at frequent intervals. All food was withheld while the temperature remained above 101° F. During convalescence he placed great reliance on a combination of sulphur, camphor, and capsicum. His experience was based upon 2412 cases.*

Dr. Grassi presented a note to the Atti dei Lincei (*Literary Digest*, May 27, 1899) calling attention to the absence of malaria from certain districts where mosquitoes are numerous. He believes that some varieties of gnats are connected with the propagation of the disease. The common gnat, *Culex pipiens*, he regards as harmless, but a larger species, *Anopheles claviger*, known in Italy as the "zanzaretta," or "moschino," is very prevalent in malarious districts. It is active only

*NOTE.—A very interesting article in the May number of *Current Literature* treats on the subject of malaria and mosquito infection. It seems very difficult to account for the malaria of New Mexico, the Texas Panhandle, and southern Colorado upon this theory however.

after sunset, which may explain the old superstition that it is dangerous to fall asleep in a malarious region just after sunset. These discussions may cause active measures to be taken for the destruction of mosquito larvæ in places where malaria abounds.

The following quotation from General Wood's article in the May *Scribner* very clearly shows by the testimony of this excellent medical man that there is something else besides mosquitoes to be accounted for in searching for the causes of malaria. Dr. Wood states: "Of the Spanish soldiers thousands were sick from the deadly malaria and exposure in the trenches, where in common with our troops they had been drenched and baked by turns, and lived in the freshly upturned earth, *deadly with the germs of malignant tropical malaria*."

Observance of the strictest hygienic rules among troops is capable of largely diminishing malarial fevers, and in such diseases an ounce of prevention is worth tons of cure. The guards must have hot coffee through the night watches, and men not on duty a good hot breakfast before going to work.

The Brand method of bathing I used for all my mountain fever cases, which I reported as typho-malarial, and I was fortunate enough never to lose a case. The constant care and nursing and cleanliness of the patient and his surroundings are of vital importance. Having suffered the disease myself, I can remember the intolerable thirst and the longing for lemonade. The depressing nausea and the dreadful weakness gave me my first impressions as to the treatment necessary. The tedious convalescence calls for the best tonic obtainable; I have used in the military medical service the following:

℞ Quininæ sulph ..... gr. xx–℈ j.
Tr. ferri mur..... ℥ ss.
Syr. simple ..... ℥ ss.
Aquæ.....q. s. ad ℥ vj.

M. S.: ℥j t. i. d. ten minutes before meals.

Warburg's tincture as a remedy in malarial fevers has been largely and successfully employed in India, but for some reason it does not seem to be popular in this country. Perhaps the fact that quinine is more readily obtained and more easily prescribed may have something to do with the neglect shown the prescription of Warburg. It is especially indicated in the climates of our new possessions, and should be largely included in our medical supplies. Messrs. Parke, Davis & Company have manufactured the prescription in powder form enclosed in five-grain capsules; this is especially convenient for travelers, and must result in making the preparation more available for troops in the field.

Hydrotherapy when it can be employed is of the greatest impor-

tance, and I have made use of the bath-tub for these patients in military and government hospitals in the western States and Territories, with the most gratifying results. General sustaining treatment is indicated even if the temperature be above 100° F.; cooling drinks (iced lemonade) are gratefully received; general hygiene, particularly as to abundant supply of fresh pure air and clean bedclothing; attention to avoidance of disturbances of any kind which is distressing to all patients. Rectal alimentation in malarial fevers has received very little attention; it is peculiarly suited to many of these anemic cases. Nutrient suppositories of goat's blood or rectal injections of warm goat's blood is a method of sustaining feeble patients which is worthy of use. Eggs, milk, and beef essence are always indicated.

PRACTICAL POINTS IN THE TREATMENT OF CYSTITIS IN WOMEN.

BY DR. CHARLES WILLIAMS, PHILADELPHIA, PA.

When it comes to actual experience in the treatment of this common and often baffling condition in women, the practical physician is frequently put to great stress to devise the proper plan for the cure of each case; for the lines laid down in the text-books are often inadequate and even misleading, while the results of his experience in one case often are of no value apparently in another patient suffering from the same disease. In considering the treatment it is well to divide the plan of attack into local and constitutional treatment. It is well to remember also that both of these must vary according to the cause and characteristics of the inflammation. In the first place, it is always essential to think first of the possibility of the existence of a continuously acting cause, such as stone in the bladder or retained urine going on to decomposition. Such conditions as these must be removed if we hope for definite improvement.

The following plans of treatment are those that have met with success in my hands: In acute cases the palliative plan is to be pursued, but in all cases constitutional treatment is of the greatest importance; we must at the outset so regulate the character of the urine that it will cease to be an irritation to the bladder. Pain and tenesmus are the two great symptoms complained of by the patient, and they both demand early attention, for they are great factors in the management of the case. The whole surface of the body should receive attention, and the emunctories should be kept in an active condition; the bowels also should be kept in a fairly free condition to prevent the effects of straining. For this purpose saline laxatives are

the best. A glass of the natural purgative mineral waters one-half hour before breakfast may be taken, or one or two teaspoonfuls of the phosphate of sodium in one-half a glass of water, this treatment to be kept up continuously for some time. The patient will have to find out for herself the exact quantity she requires, for some need as much as a tablespoonful. It is more efficacious in hot water. Finkel recommends the use of saline laxatives even up to the point where there is real intestinal hyperemia for a time, in order thus to divert the blood from the bladder. Any deranged condition of the nervous system which tends to produce an irritating urine should be investigated.

Indigestion has been mentioned as one of the predisposing causes. This should be treated, if it exists, with suitable diet and medication. Cystitis may be aggravated by such a condition, and this is certainly true of a rheumatic or gouty tendency. The patient should have a milk diet, always guarded, I think, with lime-water, no matter how it is taken, hot or cold; it makes the milk more digestible to all patients. Then hot milk with a little salt makes a good variety, still with the lime-water added. Sometimes we can vary this by pouring the milk over bread that is toasted and thoroughly dried, then pouring away from the bread before taking. The diet should always consist largely of fluids—eggs and soups. The Franco-American soups and bouillon are excellent; lamb broth should be strained to make it clear; and raw eggs beaten up in milk can be given. If the patient is very prostrated a little stimulant can be given, being very guarded in its use. Whiskey I prefer to anything else, because it is more stable. If we want to vary the diet still more, we may give lean meat in small amounts. For vegetables, I specially like those that grow above the ground, as lettuce, celery, and spinach. Cold-slaw does not always disagree with these patients. The diet is of importance. If the cystitis depends on a gouty or rheumatic condition, avoid red meat; the white meat of fowls and fish makes a good diet.

In acute cystitis we may give diaphoretics. The patient should have rest. Diuretics also are indicated if the urine is loaded with solids. Vichy water with flaxseed tea and other demulcent drinks can be given. Care should be taken not to push the diuretics too far.

What shall we give to relieve pain? Opium is indicated in the form of Dover's powder with camphor every three or four hours, or if necessary morphine hypodermically, injected until two or three doses have been given, or until we find that the patient gets six or eight hours rest at night. These should be given by the physician only. Then during the day we can make the patient comfortable with codeine. I prescribed this for a patient recently—one-fourth grain

codeine with camphor, one dose to be administered every hour until three had been taken—that is, if the third was needed. It is plain that codeine does not cause constipation and itching of the skin and nausea as do the other preparations. Then I think in giving codeine one thing is certain: the taste and desire for it do not increase as for opiates. We must do something that will relieve pain for months, and even, as I have known in one case, for two years. While we may use opium at the onset of acute cases, and at the end in cases of very old people, we hesitate to use it in general chronic cases. But when the woman is over eighty years old, as in an interesting case of mine, where cystitis was produced by stone in the bladder, and where the urine had to be passed every fifteen or twenty minutes night and day, we feel justified in producing narcotism. This old lady wore out nurses one after another. Finally I left her in the care of another physician during an absence of two months. She lived until I returned, and died two days after. She died from the irritation produced by the stone in her bladder. Now it will probably be said, "Would a physician allow a patient to suffer for two years without resorting to operation?" But here is a patient over eighty years old, who had opisthotonos, and who had degeneration of the arterial walls. Yet while it seemed unsafe to resort to etherization for an operation, I should have been willing to risk it if the patient and friends had been willing. It was remarkable that a person should suffer so long as she had before resorting to any kind of treatment. The last few times I visited her it seemed impossible to give her enough opiates to keep her sleeping for two hours at a time.

Opium is very apt to derange the digestive organs and the secretions, especially of the kidney. If there is frequent urination and the tenesmus is severe, give, say, fifteen grains of equal parts of potassium bromide and ammonium bromide in camphor water or plain water, repeated once or twice a day. It will sometimes respond to this treatment when it does not to opium. Or give eucalyptus oil in doses of two to five drops, or the tincture in fifteen drops or more; we know this has a well marked effect in albuminuria. Benzoic acid is perhaps the most useful in a large number of cases. It is what I always resort to in the beginning of acute cases, or when I first take charge of an older case. It seems to act like a specific, giving speedy relief:

℞ Acidi benzoat..... gr. v–x.
Inf. buchu.

M. Sig.: Three or four times a day.

Or I like to use the benzoate of ammonium:

℞ Ammonii benzoat..... ʒ iij.
Inf. buchu ..... f ʒ iv.

M. Sig.: A teaspoonful every two hours, or a tablespoonful three times a day.

Remedies which have a direct effect on the mucous membrane are to be used in the advanced stages, and in this list are copaiba, balsam of Peru, and tar; they can be given in capsules. All these may be tried in cases that are evidently due to some exciting cause that we fail to recognize. Oil of turpentine may be given in capsules. I think they usually prefer it in water or on a lump of sugar.

If the physician is possessed of a good battery, for local faradization this may be used, one electrode being placed over the spine and one over the bladder. It is claimed that this has been followed by cure—when, of course, there is no demonstrable lesion.

But when all these remedies fail, we must resort to the radical and surgical means. The bladder is distended and washed out. The proper and frequent washing out is very important. We should never trust it to a nurse until she has been given careful directions. In washing with warm water add a little salt to about a pint. The fluid is apt to give pain if the specific gravity is below that of urine, hence plain water should never be used. A fountain syringe may be used with a recurrent catheter attached. Often a vesical pain is relieved by the injection of a solution of morphine. One little point to be observed is to avoid too rapid distention, forcing the bladder unduly. Use a catheter that enables the physician to control the flow. Or use a glass catheter and attach a rubber tubing and funnel, then pour the water into the funnel; this can be done slowly. Another little point is that air must not be driven into the bladder. We must pour some water first through the catheter before putting it into the bladder. A comfortable temperature for the water is 110° F. Now pour the water in and gradually distend. Perhaps we can introduce only a couple of ounces the first time. But we can coax the patient and coax the organ to a degree of tolerance. It is an important point to get the bladder back to its normal condition of holding urine. In some cases we wish the water to pass in and directly out again; then we should use this double catheter. It allows the water to run out without removing at all, or causing any discomfort to the patient by taking off the rubber tubing. We may take a hard-rubber or a glass catheter if caustics are to be used at all. The washing out should be done two or three times a day. Some one of the family or a nurse must be taught to do it.

Having prepared the bladder by washing, we may apply our medication. Anodynes are most happily used, remedies which produce local anesthesia. We will see perhaps in most of the text-books the solution of cocaine recommended. I would say that it may be used once or twice. It cannot be used with safety more than that, except at very long intervals. It is an irritant, it is not very effective on some

mucous membranes, and when it is used in the throat or nose or mouth it soon loses its comforting power. Astringents and alteratives are most commonly used, especially silver nitrate, zinc sulphate, and tannic acid. Potassium chlorate is very useful. When a strong solution of nitrate of silver has been used, always follow with a salt solution.

When the urine is alkaline and has been retained for a long time, carbolic acid may be used, two minims to an ounce of water. Now in using carbolic acid never use it without first mixing with glycerin. It can be thoroughly mixed with water if the manipulation is carried far enough. A case once came to me for treatment where a vaginal douche with carbolic acid had been ordered. But evidently the carbolic acid had not been mixed with the water, and floated as an upper layer. It ran over the vulva and nates and produced a mass of sores. It makes a sore place which is pretty hard to cure. So I made it a rule always to order it mixed with glycerin, and often we can have it mixed at the drug store.

We are told that cystitis is always the result of infection; at any rate benefit comes from the use of bichloride of mercury. All of the books tell of the value of silver nitrate in inflammations of the bladder. I have always used a twenty-grain solution, and I am surprised how little pain is produced by it. If we used a sixty-grain solution it should always be followed by a bath of the normal salt solution, and only a very little should be introduced at one time. Even if only a twenty-grain solution is used only a few drops should be injected at a time.

Instillation is a favorite method of treatment with many. This differs in that the medication is injected in very small quantities and allowed to remain longer. An instillation tube is something like a medicine dropper. There are some that are very nice and some that are not safe to introduce into the bladder. Those that are like an eye-dropper, with a round bulb on the distal extremity and perfectly smooth, are not in danger of hurting the mucous membrane. Silver nitrate and sublimate solution and emulsions of iodoform may be introduced in this way. A good remedy to use is the iodoform pencil; it is introduced into the urethra and followed up by pressure of the catheter or applicator. An application that is often very comfortable is:

Carbolic acid	♏ x.
Glycerin	f ʒ j.
Lime-water	f ʒ iij.

I think I never used anything in cystitis with better results. It can be used every other day; sometimes I dilute it. Make it hot or warm; never introduce anything into the bladder while cold.

A more directly topical treatment is done by inspecting the mucous membrane of the bladder through the urethra, illuminating with the headlight, and carrying the application directly to the spot. We have a very small opening through which we must work. This is better sometimes than putting medicine over areas that are not inflamed. The bladder is said to be affected more often over small areas than over the whole surface, yet I must say that those I have examined had the appearance of a general inflammation.

If all our efforts have failed so far, it is because the bladder has not had sufficient rest. We have not given the chief indication for rest. We may have to resort to something to establish an opening that will carry off the urine as soon as it is emptied into the bladder; we may have to make a vesicovaginal fistula.

PROFESSIONAL ASPIRATION.

An ambitious and notably self confident young man, lately graduated from one of the leading American medical colleges, was planning to begin private practice; and while in the full flush of enthusiasm over his brand-new degree of "M.D." honored the Successful Practitioner who is also Something of a Philosopher with a call, during the course of which he did not seek either to hide his unbounded faith in his own knowledge and skill or in any way to discount his anticipated professional position and the degree of his ultimate success. The Practitioner, experienced as he is in the ways of human nature, assumed an attitude of implied consent to everything his visitor said, meanwhile watching the right occasion to make some sound observations and offer a little seasonable and sensible advice. Such an occasion presented itself in an unusually favorable manner when, in discussion of the numberless opportunities which the present age, and particularly this country, offer to those best qualified to reap of their varied and splendid bounties, the young graduate remarked something to the effect that he had already a good start upon the professional ladder, and fully expected to have a firm grip on the highest round of it before finally relinquishing his yet unworn medicine case.

"You will bear my very best wishes with you in your ascension of the ladder of the medical profession as well as of the ladder of life," was the studied reply. "But it will hardly be to your permanent advantage to be too much carried away with the idea just expressed by you. The topmost round of the ladder is an excellent metaphor for one of those positions never yet attained by any climber. It is too far above the clouds for the sight, to say nothing of the reach, of the ordinary mortal. I am a firm believer in climbing constantly, heroic-

ally, and enthusiastically; but I will admit that now, after nearly a half-century of what you might call moderate success, I am not afraid to keep going up for fear of some time stepping off the highest round into professional space. Now let not the lack of complete realization in my obscure case discourage you in the very least; but at any rate let me advise you not to map out your schedule too far in advance —else your time-table may be obliged to take a vacation now and then to allow you a chance to catch up with it. This advice is not intended to be of the cold-water variety, but is prompted by some of the undercurrents of my own professional experience, for while the main ambitions of my maturer life have been in a great measure approximately fulfilled, the majority of those of my young manhood's fancy have been scattered far and wide over my path. I am free to say that this is the experience of the larger number of us — it may possibly be the experience of yourself."

"It appears to me," responded the young man, "that the principal reason why such a large proportion of men and women fail to approach nearer to the top of the ladder is because they are altogether too careful of where and how they step. I somehow believe that in a profession, as in love and business, 'fortune favors the brave,' and that a little judicious recklessness now and then under the mantle of unlimited self-confidence and supreme presence of mind will find itself at least a little higher up in the end than personal hesitancy under the cloak of professional caution. I am quite well aware that the danger increases according to the square of the distance from the ground attained, but 'no danger, no glory' is in my humble opinion no less true in the arts of peace than in those of war. In my estimation, it hardly pays to hold like grim death on one of the lower rounds of the professional ladder. The best rewards of such exertions somehow seem to fail to pay for the long and severe grip."

"Evidently," replied the Philosophical Practitioner, "you misunderstand the comparative values of the various positions on the professional ladder. There is no lasting laurel or real value to be gained by grasping hold of a round above ordinary reach by some emotional-athletic feat, only to inevitably surrender it after a temporary enjoyment of its novelty and possible benefits. Temperament, training, and surrounding conditions largely determine the ultimate place of an individual worker in any profession, and until these fundamental factors undergo some radical changes, which I at least do not expect to live to see, the majority of us will probably be found within hailing distance of our destined locality about nine-tenths of the time. The opportunities for making great headway on the ladder are found many times in changing and unfolding conditions, when minor circumstances

become the sport of the resourceful and the handicap of the weak. At such times every fair advantage is well worth taking, and rightly grasped, it need not often be lost. Generally speaking it may be said that the strength and tact necessary to securely hold one round is developed in finding and realizing complete mastery of the ones below. When, only by the employment of some peculiar combination of circumstances, the climber is raised several degrees at a single bound, he is hardly prepared to maintain that position through tribulations and tests, and he usually finds it more comfortable and best to vacate it for his proper sphere when the inevitable crisis comes. Such a feat is no credit to the performer himself, to his profession, nor to the world at large. Meanwhile the slow but steady climber is making real instead of apparent progress, or at least is losing no ground; and in the end he often holds the higher of the two places. For my own part, when I see a man, to all appearances above me on the ladder, slackening his grip on the round he could hold with perfect safety in order if possible to drag himself up only one higher, I modestly begin to think that he will be looking for a place on my round in the near future. When that possibility becomes a reality, and he begins his former policy of risking the substance of the one for the shadow of the other, I feel morally certain that the fellows next below me will be obliged to make room for him, for a time at least, until he drops to a round that he can hold with ease. The real test of the climber's mettle is his ability to grasp the higher one without relaxing his grip on the lower."

"But do you imagine that the motives, exertions, and sacrifices of professional life are appraised at their true value by one's fellows and neighbors; and does it pay to think too much of what others may consider our positions upon the ladder of which you speak?" inquired the young physician. "Is it not much more satisfactory for every one to be the judge of his own value and duty to himself and to his profession; and if he occasionally overreaches himself and falls a round or two, why take the catastrophe so seriously? Why not let history and posterity rather than our jealous contemporaries be the reckoners?"

"History and posterity," interposed the Practitioner, "will enter the names of only a few of us. These things best index any era, and give leading characters belonging to it or typical of it their ultimate places therein, but the truest value of a professional man can be determined only by his contemporaries. Every-day history is made up very largely of factors far from deathless, while those things which give distinctiveness and value to professional service are exhibited far more privately than publicly. Those with whom we sustain personal

and intimate relations year after year are far better able to do us full justice than history and posterity with meager reminiscence could possibly be. No one should have any better and more accurate conception of your ability, skill, and integrity than your professional associates, patients, and friends, and the respect and esteem of none other is so valuable or so satisfying, or so well indexes the real worth of the man. The professional genius who is anxious to hand over to posterity and to some far-off time the task of 'sizing him up' is not infrequently one who is more or less fearful of the unbiased verdict of the present. In professional life at least one makes his own final history as he proceeds, and mute posterity but puts her seal upon the position which his coevals have given him, powerless to blot a single woful instance or to add a condoning iota.

"When I advise you to be satisfied with a fair measure of professional success, I do not mean that your eyes and aspirations should be centered only upon that round of the ladder where your feet rest secure. Look as far above you as you may be safely able, but let not too intent gazing at an abnormal angle at any time endanger your physical equilibrium. Even to well maintain any valuable position nowadays demands constant and careful attention, and the division of this faculty's force and vitality between present and higher positions must be made with full knowledge of the necessities of the one and the possibilities of the other. The attention necessarily given to our own material environment should be considered as one of our employments, keeping pace of course with our ascension of the ladder. Attention bestowed upon the rounds above us should afford rather a pleasant relaxation from the onerous duties of our own positions and occupations, as well as giving us here and there an opportunity to reap from special fields. Equilibrium is frequently destroyed by a too fixed concentration of any one point, in which condition one may become as it were hypnotized by his own mental steadfastness. This situation is possible with respect both to our own round and those above us—neither should be eclipsed by the exaggerated importance of the other."

"After all," mused the Successful Practitioner who is also Something of a Philosopher in conclusion, "it is our own physical and mental qualities, proven in the struggle of professional life itself, which count in the long campaign of professional ladder climbing. Pretence seldom holds out very long, but, like the proverbial chickens. comes home to roost upon the rounds of its exemplifier, while lapse of integrity and undesirable qualities generally are heavy handicaps upon the person of whoever accepts their charge without counting the cost of carrying them just as far as he climbs himself. The adage

tells us that 'there is always room at the top,' but observation and experience go to show that very little of that room is taken up by those who are fanciful and overloaded through a large portion of the ascent. The most bothersome idea of all is the not uncommon hallucination that the climber is destined to place his feet upon the topmost round. Where this type of ambition becomes chronic it generally gives rise to a condition where nothing short of the actual attainment of this phantasy could be satisfactory as a personal reward. Thus the supremest end of all effort becomes closed against us. He is the best climber, to my mind, who looks above as often as, and only when, a sound foothold enables him to do so with perfect judgment and reasonable safety. Such a one can find genuine satisfaction in the fair maintenance of any position well gained. He, too, is best prepared to dispense the spirit of comradeship, cordiality, loyalty, and service among his friends and neighbors on the round where his feet rest, and is not liable to spend his days of best usefulness dreaming of what might be realized upon the rounds far out of his present if not beyond his ultimate reach."

Professor Koch, who sailed for the Dutch East Indies in August to continue his research on malarial infection, announces, says the *Journal of the American Medical Association*, as the result of his studies in the Tuscan Maremma, that he is convinced that man is the only host of the malarial parasite during the months from summer to summer. The alternating host, the mosquito, is found all the year round, but only during the summer months does the parasite find in its body the warmth necessary for its development. When summer arrives the mosquito derives the parasite from one person and transfers it to others, thus transmitting infection. The connecting link in the infection is therefore the recurrences during the fall and winter, in the persons infected the summer before. If these recurrences could be jugulated—and this is possible with quinine—the infection could be eradicated before the arrival of summer; the mosquitoes would then find no parasites, and malarial infection would gradually die out. When he first arrived in Tuscany, in April, all the cases he could find were old, dating from 1898. Suddenly, on the arrival of warm weather, large numbers of fresh cases were noted — a regular epidemic. He concludes that it is possible with the aid of quinine to break down the bridge that connects season with season, and in this way exterminate malaria.

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EDITORIAL ARTICLES.

PHOTOTHERAPY.

Some time ago a Danish experimenter named Finsen devised a red-glass treatment for smallpox. He founded his line of action in this disease upon certain proved data, that the blue, violet, and ultra-violet end of the spectrum—in other words, the chemical rays—were the efficient factors in the causation of an inflammation of the skin, erythema solare. To exclude these rays would, therefore, eliminate the aggravating factors of light, and thus the skin of the smallpox patient would be less subject to inflammation were he protected by being deprived of the irritating rays. It is stated that Finsen's small-pox patients have exemplified the mollifying influence of the red-light treatment, the skin in no case showing the unfortunate results which not uncommonly pertain to the disease. Finsen has now inaugurated a new method of applying light therapeutically, by using that which in his former experiments he aimed at excluding, and so treating local superficial bacterial skin diseases by the concentrated chemical rays of light.

The treatment is founded upon data which appear to be proved: (1) The bactericidal property of the chemical rays of light; (2) the power of these chemical rays to produce inflammation of the skin; (3) the power of these to penetrate the skin.

The bactericidal property of light has been studied by many investigators, the most trustworthy experiments attributing the result especially to the blue and violet rays. The concentrated rays very quickly kill bacteria. Finsen destroyed plate cultures of bacillus prodigiosus in ninety minutes of sunlight exposure. With an electric arc of twenty-five amperes a longer time was required.

The inflammation of the skin known as erythema solare has been shown to be due to the ultra-violet rays. The numerous cases of injury by the *x*-rays are probably due to causes allied to this photochemic property of the ultra-violet rays. Numerous experiments have proved the power of these rays to penetrate the skin. Finsen's experiments included the insertion of tubes filled with chloride of silver under the skin; these being blackened when the rays were directed upon them.

These principles being affirmed, the application of phototherapy to the needs of mankind has appeared reasonable. Finsen has devised an instrument for isolating the photochemic rays, and for concentrating and cooling them for therapeutical uses. He has considered the rays would be useful in all skin diseases of microbic origin, but so far has only used them in cases of lupus and alopecia areata. He has so far treated three hundred and fifty cases of lupus vulgaris with very satisfactory results. The results have been so certain and so constant that when this treatment is ineffective the accuracy of the diagnosis of lupus is doubted.

In days when wireless telegraphy and other physical wonders are attracting paramount attention, it will not be deemed incredible that new revelations may continue to proceed from the ultra-violet end of the spectrum. From this region out of the unknown the known slowly crystallizes.

EDITORIAL NOTES.

Some Diseases of Africa.

Among the medical curiosities emanating from Africa must be mentioned the disease known as *la sudanite*, which is a name given by the French to a fever supposed to be caused by the tropical heat. It is a disease known to Africa only, and is often called moral fever. It is now attempted to account for the shocking murder of Lieutenants Klobb and Meynier by ascribing the acts of Captains Chanoine and Voulet to the influence of this *fievre morale*, of which they were then the victims. It is only charitable to believe that some such explanation of this peculiar act will ultimately be sustained.

Another African mystery is described by Captain Welby, who has just returned from an exploration of a hitherto unknown district of Abyssinia. He describes a journey to a place called Walamo. The place had an evil reputation. The persons who entered the country were supposed to become the special prey of demons—in fact, became possessed by devils. Captain Welby found the inhabitants very

friendly, although they had never seen a white man before. Suddenly one of his Somali rushed into the camp shouting "Walamo, Walamo!" He was frightfully excited, kicked like a madman, and seemed to be possessed by a devil. The maniac the next day was perfectly well. While on the march he had another attack of this curious madness. This disease is supposed to follow the eating of food in the presence of the Walamo people. Captain Welby resolved himself to eat a meal in the presence of these people. When everything was prepared, about one hundred people watched him. After the meal was over he thought no more about it until the next day, when he became thoroughly ill, and as he had never been ill before he was unable to find a cause for this mysterious sickness. The whole matter is probably one of emotion on the part of the Somali, and coincidence on the part of an avowed skeptic like Captain Welby.

Prenatal Honors.

In his "Decline and Fall of the Roman Empire" Gibbon relates a singular anecdote of a prince having actually received regal honors before his birth. The wife of Houmouz, one of the successors of Artaxerxes, remained pregnant at the time of her husband's death, and the uncertainty of the event, as well as conjectures of the sex, excited the ambitious hopes of the princes of the house of Sassan. The apprehensions of a civil war were, however, soon removed by the positive assurance of the Magi that the widowed queen had conceived and would safely produce a son. Obedient to the voice of superstition, the Persians prepared without delay the ceremony of the coronation. A royal bed on which the queen lay in state was exhibited in the midst of the palace, the diadem was placed on the spot which might be supposed to conceal the future heir of Artaxerxes, and the prostrate satraps adored the majesty of their invisible and insensible sovereign.

ITEMS AND NOTES.

THE plague in Russia is reported to be of the pneumonic type.

EIGHT or ten new cases of plague are daily reported from Oporto.

THERE is at present a mild epidemic of typhoid fever at Newport.

TWO deaths from hydrophobia were reported in Chicago a short time ago.

THE Legislature of Virginia will establish a State hospital for epileptics.

PLANS have been formulated to establish a Jewish hospital in Omaha, Neb.

MEDICAL DIRECTOR J. R. TRYON, of the navy, has been placed on the retired list.

THE Pennsylvania State Hospital for the Insane at Norristown is at present greatly overcrowded.

DR. JULES SIMON, of Paris, physician to the Hôpital des Enfants Malades, died recently from heart disease following influenza.

DR. WILLIAM H. HOWELL, professor of physiology, has been made dean of the Johns Hopkins Hospital in place of Dr. Osler, resigned.

REPORTS from Alaska show that a disease greatly resembling acute tuberculosis is prevailing among the natives in many parts of that country.

OWING to the insufficient number of medical officers in the British army, the authorities have been obliged to employ a number of civil practitioners.

ASSISTANT SURGEON M. J. MCADAM, of the United States Marine Hospital Service, in charge of the Marine Hospital at Key West, has died of yellow fever.

A BACTERIOLOGIC institute has been established in Vladivostok, the principal Russian port on the Pacific, and another is to be opened at Merv in Central Asia.

PAUL HENDRICK KRUGER, a nephew of President Kruger, is a recent graduate in medicine of the University of Edinburgh, where he won the Syme surgical scholarship.

THE twenty-seventh annual meeting of the American Health Association was held at Minneapolis, Minn., Tuesday, Wednesday, Thursday, and Friday, Oct. 31, Nov. 1, 2, and 3.

A RECEPTION was given by the New York State Medical Association to Drs. Keen of Philadelphia, Osler of Baltimore, and Fitz of Boston, on Wednesday evening, October 24, at the Academy of Medicine.

BY the will of Dr. Galvin Ellis, of the class of '46, and who died in 1883, $140,000 has been given to Harvard University. Most of this is to be devoted to the education of his descendants and to maintaining three professors at the medical school.

A VERDICT for $13,092 was given on October 14 at Reading, Pa., against Dr. John Edge, as damages for the result of a surgical operation upon a woman; $8092 to the patient herself, and $5000 to the husband for the loss of his wife's services.

THREE new leproseries are to be opened in southern Russian provinces, accommodating 80, 150, and 120 lepers respectively. All lepers who are able to work in the asylums will be compelled to do so, although the products of their labor will not be for sale outside.

DR. FERNANDO GONZALEZ DEL VALLE, the oldest physician in Cuba, died in Havana on August 14, at the age of ninety-eight years. He was graduated in medicine in 1823, and had practiced from that date up to within a short time of his death in that city. He held for many years the chairs of pathology and of clinical surgery at the University of Havana.

THE king of Italy, according to an English journal, is a vegetarian, and lives entirely on vegetables and fruits. The doctors have also forbidden him to drink coffee, so his beverage is claret well diluted with water. The king never feels so well as when his fare is bread, potatoes, and oranges, although peaches are his favorite food. The queen has made repeated attempts to become a vegetarian, but finally has given up in despair, being fond of a generous diet.

ACCORDING to the *Philadelphia Medical Journal*, one in one thousand of the people of Scotland die from old age, and the Registrar-General's report, just issued, shows that in 1897 the death-roll of Scotland included eighteen centenarians. He mentions that at ages between 95 and 100 years, forty-one men and 100 women died, while four of the former sex and fourteen of the latter were 100 years or over at death; six women were 100 years; one man and two

women 101; one man and one woman 102; two women 103; one man 104; two women 105; while one man and one woman were returned as being 107 years of age at death.

A MEDICAL practitioner in London, says the *Medical Record*, gave a patient a bottle of tonic medicine which the patient complained made her ill. In order to assure her that it was not poisonous, the doctor took several swallows of it. When he arrived home he had a convulsion and died not long afterward. Analysis showed that the bottle contained a large amount of strychnine, the doctor in compounding the medicine having used a solution of strychnine by mistake for chloroform water.

A YOUNG French physician is professor of anatomy at the Medical College at Pekin (*Journal of the American Medical Association*), but he found it impossible to obtain sufficient cadavers for demonstration, as owing to the pious reverence for the dead no corpses are at the disposal of the faculty except those of executed criminals. He recently complained to Li Hung Chang, as the *Vienna Freie Presse* relates. "But you get all the executed criminals," the latter rejoined. "Yes, but they are far too few for what we need." "That is easily remedied. We will have more criminals executed."

IT is stated by the *Journal of the American Medical Association* that two druggists of York, Pa., recently entered into a lively competition regarding the sale of morphine, and one of them offered the drug as low as ten cents for fifteen grains. As a result of the increased consumption, at the low price, many young men have become addicted to the habit. The local press states that there are one hundred habitués. A crusade has been made against the sale of the drug, owing to the death of one of the prominent young men of the town, which followed a hypodermic injection administered by a friend.

IT is not often that a man celebrates his silver wedding twice in his life, with a different wife each time, but the *St. Petersburger Medicinische Wochenschrift* relates this of a Russian merchant who recently died at Belgorod. He is known to have traded at the yearly markets in the Ukraine for over a hundred years, and it is claimed that he was 140 when he died. Two German physicians have recently celebrated the seventieth anniversary of their professional activity—Hochberger of Carlsbad, and Nieberding—in their ninety-seventh and ninety-fifth year respectively; and Kohlschmitt, of Oldenburg, looks back over seventy-one years of active professional life.—*Journal of the American Medical Association.*

As a result of a series of experiments on dogs, turtles, and frogs, Dr. Richard H. Cunningham, of the Vanderbilt Clinic, New York City, has, says the *Journal of the American Medical Association*, come to the conclusion that death in the case of the electrocuted is not due to paralysis of the heart, but to fibrillary contraction of that organ, which results in collapse of the nervous system. In all cases of this character, it is claimed, death is preceded by a period of consciousness, during which the recipient of the shock feels, but without the sensation of pain. In seemingly sudden death from shock due to powerful currents, it is stated that the thorax in the case of the lower animals has been opened and the heart found still beating. From these experiments one would be led to the belief that persons coming in contact with charged electric wires might be resuscitated by appropriate remedies, "such as creating artificially a temporary circulation of a fluid capable of sustaining the heart and the nervous system until the heart has recovered sufficiently to maintain the circulation in the normal manner."

According to the *Philadelphia Medical Journal*, some flaring announcements appeared recently in the English lay papers to the effect that an English physician had "discovered the cause of cancer;" and Dr. H. Lambert Lack, a rising laryngologist, has had to send to the medical press a repudiation of the fame thus indiscreetly thrust upon him. Dr. Lack, it appears, made one experiment to test a theory—"that if normal epithelium by some accidental means obtained entrance into the lymph-spaces, it would find no barrier to its continued growth, and would produce all the phenomena of cancer." The experiment consisted in the injection into the peritoneal cavity of a healthy rabbit of an emulsion of the epithelial cells of a healthy ovary. The animal died fourteen months afterwards, and masses of growths were found post mortem in the abdominal and thoracic cavities, "having the characteristic features of typical ovarian cancer." This is the single experiment upon which columns have been written —probably much to his chagrin—hailing Dr. Lack as the discoverer of facts revolutionizing modern pathology.

The commission, the members of which were Dr. Calmette and Dr. Salembeni, sent out by the Pasteur Institute to study and fight against the plague in Oporto, returned to Paris on October 2. The members of the Pasteur Institute fêted Dr. Calmette, who has returned delighted with the result of the commission—such being, in fact, a complete triumph for the antiplague serum. The International Commission appointed to examine the question had come to the unanimous conclusion that Yersin's serum was worthy to be extolled as a preparation

of value. No doubt exists of its efficacy as a preventive, and after the first few days' excitement and rioting, during which Dr. Salembeni was injured by being hit on the knee with a stone, the inhabitants of Oporto finally recognized the benefits of the inoculation; and during the last three days Dr. Calmette inoculated 423 workmen, firemen who carried dead bodies, and small shopkeepers. The members of the commission in the first place inoculated themselves. The efficacy was, however, less in cases with decided symptoms. Dr. Calmette was successful even in serious cases by injecting the serum directly into the veins.

According to the *Journal of the American Medical Association*, Calmette and Salimbeni, officially delegated by the Paris authorities to study the plague at Oporto, confirm Jorge's diagnosis of the extreme virulence of the germs. They were inoculated with preventive injections of antiplague serum before starting, and report that the three cases they have treated with the serum are all convalescing. In a communication to the Paris lay press (*Figaro*, Sept. 11, 1899) they state that the epidemic may last months, or even years, at Oporto, without increasing in intensity. They claim that the plague should be regarded as an infectious disease propagated by certain conditions of poverty and filth, the same as typhoid fever by contaminated water. There have been sixty-four cases in Oporto, all among the working classes, with twenty-six deaths, to September 9. The unsanitary conditions, lack of sewers, etc., invite almost any disease. All the members of the profession, local and foreign, denounce the sanitary cordon around the city as ineffectual and ill-advised, a barbarous measure resulting only in increasing the financial distress and famine in the city and thus fanning the flame of infection.

The International Conference on Syphilis (*Medical Record*), which was held at Brussels in September, accomplished little or nothing in the way of mitigating the evil of this disease, though it was prolific of resolutions. Those resolutions were: (1) To urge upon governments the absolute suppression of juvenile prostitution; (2) to take steps for the organization of an international society of sanitary and moral prophylaxis; (3) to urge upon university authorities the establishment of obligatory courses in venereal diseases; (4) to provide for the protection and moral training of orphans; (5) to secure the execution of all laws looking to the punishment of men or women who live upon money earned by others by prostitution; (6) to secure the appointment of a commission in each country to collect statistics regarding the frequency of venereal diseases, institutions for the treatment of these diseases, and measures best adapted to the repression of venereal

diseases; (7) to secure the general dissemination of knowledge regarding the danger to health of syphilis and other venereal diseases; and (8) to secure a uniform basis for the arrangement of statistics of venereal diseases in the various countries of the world.

Dr. Julius Schwalbe, the editor of the *Deutsche Medicinische Wochenschrift*, has compiled a most useful work, entitled Bestimmungen über die Zulassung zur arztlichen Praxis in Auslande, giving the substance of the laws and regulations governing the practice of medicine in ninety-eight different communities representing practically the whole of America, Europe, Asia, Africa, and Australia. These communities he classifies as follows: (1) No special laws: China and Japan. (2) The requirement of a diploma or certificate authorizing the holder to practice in his own community: Many States in the United States and some States in Africa. (3) The passing of a State examination: Some States in the United States, Austria, and Turkey. (4) The passing of a State examination, with some concessions as to preliminary examinations: Argentine Republic, Denmark, France, the Netherlands, Spain, and Sweden. (5) Regular courses in the community's own schools: Belgium, Greece, Italy, and Portugal. (6) The same, with evidence of preliminary education: Germany, Russia, and Switzerland. (7) Denial to all foreigners of the right to practice: Luxembourg and Servia.—*New York Medical Journal.*

As a result of some experiments on the phenomena of pain (*Journal of the American Medical Association*) made by Arthur McDonald, of the United States Bureau of Education, by means of a "temple algometer," he finds that in general pain decreases as age increases; the left temple is more sensitive than the right, as is also the left hand over the right. There is an increased obtuseness to pain between the ages of ten and eleven, a decrease from eleven to twelve, an increase from twelve to thirteen; from thirteen to seventeen, while the right temple increases in obtuseness, the left temple increases in acuteness. Girls in the private schools, who have wealthy parents, are much more sensitive to pain than girls in the public schools, whose parents are not wealthy and who are accustomed to work. University women are more sensitive to pain than are washerwomen, but less so than business women; there seems to be no necessary relation between intellectual development and pain sensitiveness, and an obtuseness to it seems to be due more to hardiness in early life. To summarize, acute sensitiveness to pain is greatest with girls of the wealthy classes, then with the self-educated women, then with business women, then with university women, and lastly with washerwomen.

NEW PUBLICATIONS.

THE NERVOUS SYSTEM.

This work is entirely original in purpose and execution. It will doubtless do more than anything yet published to determine the present latitude and longitude of the neurone theory, and to stamp with the seal of authority what has been already accomplished toward making that theory the established basis of neurological study. It deals with the finer rather than the grosser constituents of the nervous system, and is not intended to, nor will it, displace other valuable works upon (grosser) neurological anatomy. It will, however, amplify the histological basis of all and distinctly modernize and advance that of some of these text-books, and will greatly add to the histological foundation of this line of study.

The development of the neurone concept, the external and internal morphology of neurones, the histogenetic relations of the neurones, the neurone as the unit—these are the main topics treated of in the earlier chapters of the book, while the last part is given over to a detailed discussion of "the grouping and chaining together of neurones in a complex nervous system like that of man and mammals."

This, perhaps, best indicates the scope and character of the work. It is ably and carefully written, and will prove of especial interest and value to those who are attracted to the broad field of neurology. The illustrations are fine, profuse, and beautifully executed, and the publishers have left nothing to be desired in the appearance of the book.

As a summing up and careful presentation of the later work upon the histological anatomy of the nervous system, the work stands quite by itself and is a scholarly addition to the field of neurology.

The alienist, the psychologist, the teacher, the neurologist, and the discriminating student of neurology—these especially, but other careful students as well, will here find a treasure-house of histological knowledge which will prove of rare interest and value.

C. W. H.

The Nervous System and its Constituent Neurones. Designed for the Use of Practitioners of Medicine and of Students of Medicine and Psychology. By Lewellys F. Barker, M.B. Tor., Associate Professor of Anatomy in the Johns Hopkins University, and Assistant Resident Pathologist to the Johns Hopkins Hospital. With Two Colored Plates and Six Hundred and Seventy-six Illustrations in the Text. Pages 1122. New York: D. Appleton & Company, 1899.

PARK'S SURGERY BY AMERICAN AUTHORS.

The great demand for this work in its two-volume form has led the publishers to consider that a condensed edition in a single volume at a correspondingly lower price would be appreciated by the profession. The work has been revised up to date, and a new chapter has been added on the surgical pathology of the blood, the knowledge of which should be just as useful to the surgeon as it is to the physician. The work has been very carefully illustrated, colored plates having been placed wherever they best serve to elucidate the text. The contributors to the volume include the names of celebrated surgeons on both sides of the Atlantic. The handsome work is one that cannot fail to be popular with students and practitioners.

A Treatise on Surgery, by American Authors. Edited by Roswell Park, M.D., Professor of Surgery in the University of Buffalo, N. Y. New Condensed Edition in One Royal Octavo Volume of 1262 pages, with 625 Engravings and 37 Full-page Plates in Colors and Monochrome. Cloth, $6.00, net; Leather, $7.00, net. Philadelphia and New York: Lea Brothers & Co.

AN INTRODUCTION TO DERMATOLOGY.

Under this modest name Dr. Norman Walker, of Edinburgh, adds another book to the literature of dermatology, which is a compilation of the author's clinical lectures delivered to the students at the University of Edinburgh, and is a condensation of much practical knowledge. By the specialist Dr. Walker is best known as the translator of Unna's masterly work on the Histopathology of the Diseases of the Skin. This is evidenced by the frequent references to the histopathology of the various diseases, by the adoption of Unna's classification, and by frequent indorsement of the views of the Unna school of dermatology. To this intimate knowledge is added a very large clinical experience in a medical center.

In the opinion of the reviewer more space might have been profitably given to the chapter on the anatomy, but the one on general treatment is eminently practical. All of the more common diseases, and even some of the rarer ones, are carefully described in plain and forcible language. The book is illustrated by twenty-nine plates and thirty-four figures. Colored plates are with difficulty made true to life, and here are not especially good; but the black and white reproductions are very fine, and the figures indicate clearly what they are supposed to represent.

The book will be of undoubted usefulness to the student, for whom it is especially written, and will be reviewed and consulted with pleasure by the dermatologist.

H. P. B.

An Introduction to Dermatology. By Norman Walker, M.D., F.R C.P. Edin. New York: Wm. Wood & Co., 1899.

DISEASES OF THE NOSE AND THROAT.

The new manual upon diseases of the nose and throat from the pen of Dr. Coakley deserves more than passing mention. While the book is necessarily small and the space devoted to various imporant subjects is limited, the author has presented to the profession a volume of considerable value. The classification and arrangement of the various subjects are clear and concise, and very quickly accessible. Although the anatomy and physiology of the respiratory tract are briefly treated, at the same time the book contains all the essentials, and though it may not give the student a very broad and sweeping knowledge of the matter treated, at the same time the reader will not be confused or led astray. Under each affection a paragraph is devoted to differential diagnosis, and some of these paragraphs are quite remarkable for their conciseness and the amount of information they contain. The colored plates are good in outline and perspective, but very high in color; the rest of the illustrations are quite ordinary.

A very useful chapter on therapeutics concludes the volume.

A Manual of Diseases of the Nose and Throat. By Cornelius Godfrey Coakley, A.M., M.D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College, New York City. Illustrated with 92 Engravings and 2 Colored Plates. Small 8vo ; pages 536. New York and Philadelphia: Lea Brothers & Co., 1899.

ONE THOUSAND PRESCRIPTIONS.

In an enlarged form comes the second edition of the "Favorite Prescriptions" that have appeared in the columns of *Leonard's Illustrated Medical Journal.* An index to each malady has been carefully prepared, with cross references, so that a large number of prescriptions have been made available for the purposes of the reader. The book is a decidedly useful one, and will doubtless attain the popularity it seems to merit.

Over One Thousand Prescriptions or Favorite Formulæ of Various Authors, Teachers, and Practicing Physicians The Whole Being Carefully Indexed and Including Most of the New Remedies. Second Edition, Revised and Enlarged. Price, $1.00. Published by the Illustrated Medical Journal Co., Detroit, Mich.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Reconstruction of Pelvic Structures Incident to Lesions of the Perineum.

Henry O. Marcy (*Journal of the American Medical Association*, Oct. 21, 1899) gives the following as the essentials of his method of operating:

1. The dissection of the posterior third of the vagina, not in its mucous membrane, from its vulvar attachment, carried as deemed necessary into the rectovaginal space, and the retention of this flap.

2. In lifting forward the vagina from its vulvar attachment, the retracted transverse perinei muscles with their connections are reached and reunited by deep-buried sutures, making in this way a true restoration of the pelvic floor.

3. In rectocele with prolapse, the closure of the deep layers of the postvaginal fascia by a continuous buried animal suture, taken either in single or double line of stitches.

4. The coaptation of all superficial surfaces by a buried animal suture, applied as a continuous stitch, taken from side to side, covering the wound, when dry, with iodoform collodion.

5. In rupture involving the sphincter, the lateral dissection, the joining of the rectal and vaginal edges with buried sutures, and then finishing the operation as in incomplete rupture.

Marcy considers the closure of wounds aseptically by the buried animal suture, preferably tendon, his best contribution to surgery, and its application to the plastic repair of the pelvic structures is second in importance to few other operations.

Treatment of Shock.

Daniel T. Nelson (*Journal of the American Medical Association*, Oct. 21, 1899) says that quiet, rest in the horizontal position, and artificial moist heat have long been recognized as valuable means of restoring the lost tone to the vasomotor system. The head should be lowered enough to make gravity aid in furnishing sufficient blood to nourish and excite to proper function the important reflex centers of respiration in the heart's action in the medulla, as well as the visceral ganglia in the lungs and heart themselves. The writer says that experiments have shown that while shock first affects the vaso-

motor system, respiration is early impaired or stopped some time before the heart's action is seriously deranged or stopped, and, therefore, artificial respiration may be the means of continuing life by furnishing oxygenated blood from the vital centers in the medulla. The inhalation of oxygen is likewise indicated for the same purpose. The interstitial and intravenous injection of the warm salt solution is perhaps the most efficient, certain, powerful, and lasting remedy, particularly when there has been hemorrhage and when the case is not specially urgent. The same solution may be efficient when introduced into the stomach or rectum, and when convenient the peritoneal cavity may be used for the same purpose. The therapeutic remedies are all those which will restore the tone of the vasomotor system and support respiration in the heart's action. Of the many drugs which have been recommended and used, strychnine has, he claims, rightfully the most friends, used in the way the operator deemed best to reach the circulation and so the nerve centers. Next digitalis and strophanthus, nitroglycerin and ergot, in appropriate doses, and lastly various glandular extracts, as of the suprarenal, thymus, thyroid, mammary, and parotid glands. With these the extract of suprarenal capsule in five-grain tablets internally, also locally and hypodermically, is the most in favor at present as a vasomotor and heart stimulant.

Varicose Ulcer of the Leg.

For the treatment of indolent varicose ulcer of the leg Dr. Brunner (*Medical Press and Circular*, Oct. 11, 1899) highly recommends the application of two and a half per cent of carbonate of soda. Under its influence the ulcer heals rapidly, but the same agent is not superior to other means of treatment in recent ulcers, or those covered with exuberant fungosities. His *modus operandi* is as follows: After having washed the ulcer with a warm solution of sublimate, he applies a piece of antiseptic gauze, thinly coated with vaselin, and over this absorbent cotton soaked with the solution of carbonate of soda, and finally a bandage. The dressing is renewed each day. Twenty-four hours after the first application the ulcer assumes a more healthy aspect, and at the end of a few days it granulates abundantly; the callous edges become softer, and from that time the ulcer cicatrizes rapidly. The definite cure is obtained in from ten to thirty days.

Certain persons cannot support the vaselin, which provokes eczematous eruptions; in such cases he replaces the vaselin by lanolin, or he applies simply and directly on the ulcer compresses wet with the solution of soda.

A New Lubricant.

A new lubricant for genito-urinary practice is reported by Dr. E. Wood Ruggles (*Journal of Cutaneous and Genito-Urinary Diseases*, No. 17, 1899) as having been used in his private practice. The lubricant was recommended by Dr. Oscar Kraus. Its advantages are said to be the following: First and foremost, it is inexpensive, and may be easily and rapidly made. Secondly, it is soluble in water, and instruments are easily cleansed by immersion in warm water, even after the lubricant has dried on. On this account also it possesses peculiar advantages for endoscopic work, as it leaves no film on the surface of the cystoscope prism, and can be readily and completely removed from the urethral walls during urethroscopy by a swab of dry cotton, thus avoiding any addition to their already too powerful reflecting properties. Thirdly, it is perfectly non-irritating so far as the author has been able to discover. Fourthly, it remains aseptic when left uncovered during the whole of consultation hours, with the tips of the instruments (sterile, of course) dipped in it.

The lubricant is prepared as follows:

Gum tragacanth	48 grains.
Carbolic acid (95-per-cent solution)	50 minims.
Glycerin	3 fluidrachms.
Water, q. s. ad	4 fluidounces.

Mix the latter three constituents, pour the resulting liquid upon the gum tragacanth in a mortar, and let stand over night. The next day triturate with pestle till a homogeneous mass is formed. It can then be used from an ordinary ointment jar.

MEDICINE.

Two Hundred Consecutive Cases of Diphtheria Treated with Antidiphtheritic Serum.

From two hundred consecutive cases of diphtheria treated with antidiphtheritic serum, A. J. Tonkin (*The Lancet*, Oct. 21, 1899) draws the following conclusions: (1) The general mortality-rate is reduced. The mortality for cases treated during the first three days of illness is reduced to about three per cent, and that for all other cases to about twelve per cent. (2) Laryngeal cases treated early are markedly affected for the better, the death-rate being very considerably reduced. (3) The tracheotomy mortality is very much lessened. (4) There is less need for tracheotomy if treatment be begun early. (5) All ages and both sexes are equally affected. (6) The chances of nephritis are lessened. (7) When treatment is begun early albuminuria may not appear, will probably not be severe, and will disappear soon.

(8) Paralysis is lessened for cases treated on the first and second days of the illness. The paralysis mortality is much reduced. (9) Extension of disease to the larynx and parts below was not noted after injection of antitoxin. (10) The only disadvantage noted after its use was a slight discomfort for a few days from urticarial rashes and pains in the joints in a small percentage of the cases. The conclusions arrived at may be taken as a plea for early diagnosis and early antitoxic treatment.

Chronic Urticaria of the Throat.

Merx (*Munch. Med. Woch.*, No. 36, 1899) reports a case of chronic urticaria of the organs of the throat. The patient, a neurasthenic, otherwise a healthy individual, was often taken very sick with severe pains in the mouth and throat, which were accompanied by salivation and heartburn. The patient first called upon Merx for the removal of the foreign body from his throat, and inspection revealed slight elevations of the mucous membrane of the fauces. The epiglottis and the right as well as the left vocal cords were hyperemic. The soft palate, uvula, and tonsils were edematous. The individual had also the characteristic eruption of urticaria on his forehead.

A Case of Cirrhosis of the Liver with Severe Anemia.

A case of cirrhosis of the liver with severe anemia is reported by Hoke (*Prag. Med. Woch.*, No. 35, 1899). The anemia was the principal symptom during the whole course of the disease, and at the same time the first noticed. The case was evidently not one of the so-called "Bantische Krankheit," as might have been supposed from the similarity of the symptoms minus the tumor of the pancreas, and where the anemia in that sickness is not so severe as in that of the patient of Hoke. In this individual the number of red blood-corpuscles was greatly reduced, and the hemoglobin diminished twenty per cent.

Tumors of the Corpus Callosum.

Shuffer (*British Medical Journal*, Oct. 7, 1899) has collected twenty-five cases of tumor of the corpus callosum — eight in women and seventeen in men. Most of the cases occurred after forty; the mean duration was under one year. Headache failed in eleven cases; vomiting was absent in fifteen cases; optic neuritis was observed in ten cases, absent in seven, not looked for in the others. The mental state was always changed, generally in the direction of weakness of intellect and memory, somnolence, etc. Convulsions occurred in eleven

cases; disturbances of sensibility were rare. The mental changes appear to be much more constant in tumors of the corpus callosum than in tumors of other parts of the brain. The fact that some cases of congenital absence of corpus callosum are not mentally deficient is explained by the presence of compensatory commisural fibers. When there are no definite localizing symptoms, in the presence of increasing failure of intelligence, one ought to think of tumor of the corpus callosum. The author attempts to draw up some criteria as aids to the diagnosis of the exact site of the tumor in the corpus callosum, whether anterior, median, or posterior.

Meningitis Mistaken for Peritonitis.

Zuppinger (*Wien. Klin. Woch.*, No. 34, 1899) relates a case of meningitis followed by death occurring during the treatment of esophageal stricture by bougies, in a 3½-year-old child. A few hours after one of these treatments the child was taken ill with symptoms of peritonitis, which caused Zuppinger to believe that he had produced a perforation. Twelve hours later the child died. The autopsy showed a purulent meningitis. The esophagus was uninjured.

An Epidemic of Mumps.

An epidemic of mumps, in which the submaxillary glands were principally affected, was observed by Hoppe (*Munch. Med. Woch.*, No. 34, 1899). It has been noticed, says the writer, sometimes in medical literature that the cause of mumps existed by preferment in the submaxillary glands, and that the parotid was only secondarily affected and sometimes not at all.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Parasitic Origin of Cancer.

After a somewhat careful review of the evidence relative to the parasitic origin of cancer and the statistics of the numerical and relative increase of the disease, Dr. E. D. Ferguson (*Philadelphia Medical Journal*, Oct. 14, 1899) says the following conclusions appeal to his judgment:

1. The dissemination of cancer to or through remote areas of an

individual patient's body is a fact so frequently observed that we must accept the idea of some kind of infection.

2. The rarity of direct infection from person to person, though the opportunity for such infection must have occurred in a great multitude of instances, as between husband and wife, surgeon and patient, and in other ways, shows that the infective agent is one not readily transplanted, or that it requires a specially prepared soil.

3. The vital properties of the anatomic elements of the growths furnish fully as adequate an explanation of this limited infective power as would any protozoan bacillus, or yeast fungus; on the other hand, we are not in a position to deny the existence of extraneous organisms which may be the source of an irritation to the cells, and which may result in the production of cancerous growths.

The Bacillus of Leprosy.

Carrasquilla (*British Medical Journal*, Oct. 14, 1899) reports that he has succeeded in cultivating the lepra bacillus in human blood-serum. Two forms were observed—the long and slender bacilli, and those short and almost elliptical in shape. The author concludes that the bacillus obtained by him is Hansen's bacillus, because: (1) it resists decoloration by thirty-per-cent nitric acid; (2) there was no reason to believe that any other organism was introduced when the tubes were inoculated; (3) the filtered fluid from the cultures when injected into horses produced the same reaction as serum from lepers' blood; (4) the serum of horses subjected to injections of culture filtrates produces the same reactions in lepers as the serum from horses infected with serum of lepers' blood; (5) the bacillus stains in the same way as Hansen's bacillus. Carrasquilla hopes to succeed in inoculating animals with the cultured bacillus, and so prove his point.

Tubercle Bacillus Cultivation.

One of the distinguishing features of the tubercle bacillus is its slow growth, but according to St. Hesse (*Medical Press*, Oct. 11, 1899) this is purely on account of the nature of the nutrient media employed. With Hayden's media in an incubator he can obtain from a contact inoculation a culture in five to six hours. In the sputum, which is rather more difficult, he can determine in from half a day to one day. The media, as prepared by Hayden, contains common salt 5 grammes, glycerin 30 grammes, agar-agar 10 grammes, solution of soda (28.6 in 100) 5 cubic centimeters, distilled water 1000 grammes. In experiments on animals this is of great advantage.

THERAPEUTICS.

Thyroid Medication in the Treatment of Fractures.

Lambret (*Écho Méd. du Nord*, June 11, 1899) says that the influence of thyroid activity upon the intuitive process had been suspected long before the day when myxedematous idiocy and cretinism were traced to absence or atrophy of the thyroid gland. Postoperative myxedema following upon complete extirpation of the gland corroborated this theory, from which originated the practice of thyroid opotherapy, a system of treatment which has afforded both brilliant success and baffling failure. One of the most positive indications for the treatment is to be found in the management of fractures of the long bones. Excellent results have thus been secured, especially in younger individuals. Combe saw one of his patients grow seven centimeters (three inches) in six weeks; Saint Philippe and Guyot have seen feeble-minded children grow six centimeters in one month. Radiographic prints demonstrate upon young myxedematous individuals a rapid obliteration of the white epiphysial line of the femur under the influence of thyroid medication. Springer and Serboresco have ascertained that as the result of this treatment growth may continue until thirty-four years of age. According to the author, Gauthier, of Charolles, was the first one to exhibit thyroids in a systematic manner for the treatment of retarded consolidation in fractures (1897). Quenu reported in 1898 (Société de Chirurgie) a case of pseudoarthrosis cured with thyroids in a wonderfully short time (a few days). Reclus, and Folet of Lille, have also secured consolidation on short notice. The author having applied the treatment in a case of recent fracture of the tibia, had the patient walking on the seventeenth day with perfect consolidation. In most of these cases the treatment called for the administration of three capsules of twenty centigrammes each per diem (a total of ten grains in twenty-four hours). The causes of failure in certain cases remain to be studied. A forcible indication, however, arises of exhibiting thyroids in cases of ununited fractures in general and recent fractures in busy patients, or such as are previously debilitated; so much the more as the thyroid treatment which for its long continuance requires nice management is in such cases of short duration only, and affords permanently beneficial results.

Therapeutic Applications of Cacodylic Acid in Tuberculosis.

At a meeting of the Académie de Médecine, held June 6, 1899, Prof. Ormond Gautier, of the Faculté de Médecine, read a communi-

cation on the therapeutic uses of cacodylic acid and its derivatives. In its use in the treatment of tuberculosis Gautier further gives the following directions for the management of the cacodylic treatment in tuberculosis, especially the febrile stages:

The drug should be chemically pure—*i.e.*, free from admixture with other arsenical principles. The solution upon addition of hydrochloric acid should not give rise to arsenic sulphides nor to sulphureted hydrogen. Pure zinc in the metallic state should not decompose it without heating. It should be slightly acid, without taste and almost odorless. It must be kept in a dry place. It is very soluble in water and forms into well defined crystals.

In tuberculous patients cacodylate of soda or potash should be used hypodermically rather than *per orem*. Do not go beyond ten centigrammes of cacodylic acid per diem, and use a mean of 30 to 50 milligrammes in twenty-four hours. Continue the treatment for from seven to eight days, and allow eight to ten days' rest before starting another series. Appetite and temperature should be the guides; if the former fails and the latter rises, resume the treatment. Suspend injections upon the production of saturation symptoms—hot flushes, especially of the face, shortness of breath, rise of temperature. Concurrently with the cacodylates apply Debove's method of hyperalimentation, giving from three to 300 grammes (seven to ten ounces) of raw chopped mutton at the end of each meal. Select foods rich in phosphorus—milk, and especially yolk of egg and calcium salts, whole wheat (bread and vegetables). Avoid phosphatic syrups, which are difficult of assimilation and exhaust the stomach.

To quiet cough eschew opium, which reduces appetite, and replace with hyoscyamus or hound's-tongue (cynoglossum). Avoid dust, especially in the cities. Do not allow sweeping in the sick-room; have everything mopped and dusted with cloths wrung out of 1-to-2000 formol solution. Avoid the direct rays of the sun, sudden changes of temperature, bleak winds, unnecessary fatigue, moral impressions, and wakefulness.

Taka-Diastase, Ptyalin, and Malt Diastase.

Taka-diastase, ptyalin, and malt diastase have been studied under a large variety of conditions by Prof. A. E. Austin (*Boston Medical and Surgical Journal*, cxl, 1899), of Tuft's Medical College, Boston, and the following conclusions are drawn by him from the resulting facts:

1. When a non-albuminous test-meal is given, free hydrochloric acid makes its appearance at the end of twenty minutes after eating, and at the end of half an hour the amount of free hydrochloric acid

equals that of one or two hours after eating where albuminous foods are taken.

2. Under normal conditions the ptyalin of saliva digests most of the starchy constituents of food in the stomach within one or two hours, which takes place before free hydrochloric acid accumulates in the stomach to such an extent as to interfere temporarily with the diastatic action of saliva on starchy food. Those portions of starchy food which remain comparatively undissolved, and pass over to that portion of the digestive canal where they are acted upon by the pancreatic diastase, constitute a very small portion of the starchy food taken.

3. The administration of isolated diastase considerably enhances the digestion of starchy food in the stomach even under normal conditions.

4. The elimination of the supply of the ptyalin of saliva to the stomach will cause marked retardation of starchy digestion in the stomach.

5. A maldigestion of starchy food, due to the deficiency of the diastatic power of saliva, can be regulated by the administration of isolated diastase.

6. The impression held by many that the diastase of saliva becomes non-active fifteen or twenty minutes after eating is totally erroneous.

Intestinal Antiseptics.

Intestinal antiseptics, according to Dr. Burney Yeo, of London (*Lancet*, No. 3963, 1899), are indicated in gastric catarrh and fermentative dyspepsia. These two give rise to many other conditions, such as ordinary dyspepsia, chest pain resembling angina pectoris, vertigo, aphasia, and anemia. Even pernicious anemia has been considered as depending upon a toxin that exerted a hemolytic action. Cholera, dysentery, and typhoid fever are also diseases in which the use of intestinal antiseptics is rational. Dr. Yeo has for some years advocated the use of chlorine with quinine in typhoid fever. When given every two or three hours he has found it attended with most marked results for the better. In indefinite febrile affections, with elevated temperature, furred tongue, and foul-smelling stools, the use of thymol by the mouth, with irrigation of the large bowel by eucalyptol and soap-suds administered in the knee-chest position, has often effected a cure.

This class of cases may be due to the action of the typhoid, influenza, or coli bacillus. The cases he had treated successfully in the above manner were due to the latter. While the coli bacillus is ordi-

narily harmless and a constant, normal inhabitant of the intestinal tract, it does frequently become pathogenic and virulent, as in long-continued constipation, catarrhal conditions of the intestines, etc. The bacillus coli when taken from an appendix, the cavity of which has been cut off from the rest of the bowel, has been proved to be virulent, while the same organism found in the intestinal tract of the same patient was quite harmless. When associated with the bacillus typhosus it always seemed to take on virulent action. In typhoid fever, bismuth salicylate and carbolic acid are very useful, and calomel and salines are both of great value. Salol, Dr. Yeo thinks, is very uncertain. Eucalyptol and thymol are both good.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Resuscitation by Rhythmical Traction on the Tongue.

According to the Paris correspondent of the *Medical Press*, M. Laborde has achieved remarkable success in the resuscitation of individuals in a state of apparent death by means of rhythmical traction on the tongue. Before a recent meeting of the Académie de Medécine he related fourteen new cases. Of these cases, the half was relative to drowned persons who were brought back to life after a time varying from twenty to sixty minutes of traction. Up to the present it was impossible to determine exactly the time during which the functional properties could persist in animals apparently dead. However, among the fourteen cases referred to by the speaker, there was one, that of a drowned man, who was called back to life after three hours of rhythmical traction of the tongue. The vital properties would seem then to persist in a latent state during a lapse of time which might be estimated at three hours as the extreme limit.

Another fact which deserved recognition was that with old methods of recalling to life the respiratory movements were never established where the asphyxia had exceeded five or six minutes. By means of the method of M. Laborde, on the contrary, subjects who had sojourned under water thirty or forty minutes had been very frequently reanimated.

M. Laborde stated that it was found that the blood of animals experimentally placed in a state of apparent death was very rich in carbonic acid, and contained only traces of oxygen, but that it was never coagulated, and that it always maintained a certain temperature.

As to the heart, it was apparently stopped, and presented only

slight tremulations. As soon as the respiratory movements became reestablished it began to beat strongly. It was probable that the same phenomena occurred in drowned and asphyxiated persons.

A Remarkable Case of Nasal Obstruction.

The current number of the *Scottish Medical and Surgical Journal* (*Medical Press*, Oct. 11, 1899) publishes the notes of the following sensational case:

A Japanese workman in Singapore was brought to Dr. Keng with the history that three months before he bathed in a pond, and while doing so he suddenly felt something slipping into one of his nostrils. He made an effort to remove it, but failed to dislodge it. On looking into the left nostril, which was a little swollen, Dr. Keng could plainly see a black mass projecting from the superior meatus. A cup of water was accordingly held to the nostril, and in a short time the tail of a leech was seen projecting from the nostril and wriggling about in the water. The next question was, how to extract the leech. The tail was seized with a pair of old-fashioned artery forceps, and the nostril was douched out with a solution of permanganate of potash. But the effect of this was only to cause the creature to contract more firmly, so another method had to be tried. The patient was therefore given some chloroform to inhale, a procedure which proved effectual, for in a few moments the leech, with the forceps attached, dropped on to the floor. The man had, in the course of the three months during which the leech had located itself in his nose, lost a large quantity of blood. His weakness was, indeed, such that he was barely able to stagger into the author's surgery, and there is no doubt that had the leech not been extracted a fatal result would have ensued.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Yeast Injections in Leucorrhea.

Dr. Landau (*Deutsche Medicinische Wochenschrift*, No. 11, 1899) recommends the use of yeast diluted with beer to the consistency of a thin batter, of which he injects from ten to twenty cubic centimeters (about half an ounce) into the vagina. The yeast is held *in situ* with a dry tampon, to be removed after twenty-four hours. The treatment is repeated after two to three days, and extends over a

period of from one to several weeks. No untoward effects have been noticed, except in two cases a local itching which disappeared after alkaline injections. No injection was made into the cervix. Of the forty odd cases treated by this method, over one-half were permanently cured, sometimes after only one or two treatments; this among patients who had suffered for months and even years despite daily douching. Some patients treated at the clinic after a time experienced a return of the discharge. Others were improved only, while some who showed no objective change claimed to experience a subjective amelioration. Landau ascribes the result to a proliferation of the yeast cells crowding the pathogenic germs out of existence or neutralizing their toxins or modifying the reaction of the culture medium. Yeast injections also promise therapeutic efficiency in those cases of cystitis which are complicated with bacteriuria and alkaline reaction of the urine.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Headaches of Gastrointestinal Origin.

Headaches of gastrointestinal disorders are discussed by Dr. Frank Billings in the *Journal of the American Medical Association* of September 23, 1899, and he calls attention to the fact that such disturbances causing headache in some patients produce other nervous or bodily distress in others.

Disturbance of function seems to be the main causative factor, and the stomach frequently receives the blame for disturbances arising elsewhere. Conditions of malnutrition, neurasthenia, anemia, etc., often make it extremely difficult to assign the headache to its proper cause, headache being, like the stomach disorder, the result of some bodily condition. Fundamentally, headaches due to gastrointestinal disorders are probably toxic, and an acute toxemia may occur in a perfectly healthy individual from the overingestion of food, the ingestion of indigestible or contaminated food.

The symptoms are often those of acute intoxication. Not headache only, but weariness, melancholia, tinnitus, vertigo, sleeplessness, palpitation of the heart, syncope, and tetany or convulsions may occur.

"Bilious" attacks with nausea, vomiting, constipation, heavily coated tongue, foul breath, with headache, nervous depression, etc., are conditions apparently of chronic recurrent intoxication.

Headache due to gastrointestinal disorders is said to be definitely located, but this is not true in Dr. Billings's experience. In diagnosis it is to be remembered that gastrointestinal disorders are frequently secondary to various conditions.

Treatment is both palliative and curative—palliative in removing the source of poison; curative in applying the laws of hygiene to each case, in properly selected diet, free use of water, recreation, exercise, etc., etc.

Pelvic Diseases and Insanity.

The much discussed relation of pelvic diseases and insanity in women and the influence of local treatment upon the mental condition receive extended treatment in the *Journal of the American Medical Association* of September 30, 1899, at the hands of Dr. H. A. Tomlinson, superintendent, and Dr. Mary E. Bassett, assistant physician, St. Peter State Hospital, St. Peter, Minn., which includes the result of a careful investigation of the pelvic condition of 450 patients, with detailed and statistical information concerning operations, treatment, etc.

In only ten cases was there exaggeration of the mental condition at the menstrual period, but fifty per cent of all the women had more or less physical discomfort at this time, profuse or scanty flow with headache being the most common abnormality. Of the married women fifty-eight per cent exhibited some pathological condition, the most common finding being lacerations of cervix or perineum, the next subinvolution with endometritis, next diseases of the tubes and ovaries.

The author's most unexpected finding was such a large number of pathological conditions, where there was no apparent relation whatever between the pelvic and mental conditions and no evidence of physical discomfort. Their results may be thus summarized:

Menstrual disorder and pelvic disease, though quite common among the insane, seem in the majority of cases to bear no apparent relation to the insanity.

Cases of insanity which have lasted more than a year, or which have as their basis a defective nervous organization, exhibit practically no effect upon the mental condition from gynecological treatment, and in these cases establishment of an artificial menopause seems to hasten the onset of dementia.

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ORIGINAL CONTRIBUTIONS.

A CASE OF RAYNAUD'S DISEASE.*

BY HAROLD N. MOYER, M.D., CHICAGO.

Eponyms should be avoided in the nomenclature of medicine, but I have preferred to retain the term "Raynaud's disease" in the description of this case rather than employ the synonyms, symmetrical gangrene or local asphyxia. Perhaps the term "neuropathic gangrenous trophoneurosis" would fairly describe the underlying conditions in this case.

H. K——, aged thirty-five, German, married; has three children, the youngest aged fifteen months; the family history is quite free from neurotic heredity. The father and mother of this patient are both living and well at about the age of seventy; they have been strong all their lives. The patient is one of a family of eight children; he has six brothers all well, three older and three younger than himself. A sister was always feeble and died at the age of twenty, of what was thought to be consumption.

As a boy the patient was well and strong; he married at the age of twenty-eight. There is no history of venereal disease, typhoid, or serious sickness of any kind until he was twenty-one years of age, at which time he suffered from a severe attack of malaria. At the time he was living in Manchester, England, and left that city to go to Liverpool. The following day he was taken with a chill, which recurred daily. As the sickness occurred a number of years ago, he recalls the details somewhat imperfectly, but is positive that the whole illness lasted about eight months. He was not confined to the bed, but every day during the first few weeks of the attack he had a severe chill. Prior to the visit to Liverpool, he had been living in

* Read before the Chicago Medical Society, Oct. 25, 1899.

Manchester for two months, and had been perfectly well while there. As the chills continued, their frequency diminished; later in the disease they occurred every second day, and finally the intervals became still longer, and he ultimately recovered. His physician pronounced the disease "chills and fever." The whole duration of the attack was eight months, counting from the time he reached Liverpool until he considered himself perfectly well. After recovery from the malarial attack his health was excellent for the succeeding six years.

About eight years ago, or when he was twenty-seven years of age, the present trouble began. It started with a pain on the inner side of the lower third of the left leg. The pain was severe at all times and worse at night. At the end of two months a swelling appeared, which gradually extended until it was about three by two inches. In the center of this area was a small red mark, the redness gradually increasing until it involved the whole of the swelling. The patient's description of this first attack, which is more clearly recalled than some of the subsequent ones, is that the pain preceded the swelling for some weeks and that the redness developed very soon after the swelling appeared. The small red spot noted in the center of the swelling appeared simultaneously with it, and from this central area the redness extended toward the edges coincidently with the swelling. This first attack disappeared after local applications and a vigorous rubbing. The pain also was relieved, and he thought nothing more of the attack. Two and a half years after this the same process was repeated, but with greater severity. The area of the swelling was greater, the pain was more severe, and soon after it began the central spot which corresponded with the original reddened area in the center of the swelling turned black. This spot was about a centimeter in diameter and ultimately broke down, discharging a slough, and leaving an excavated ulcer which was slow to heal. This second attack was preceded by severe pain, the painful area coinciding with the portion of the skin which subsequently sloughed away. The site of this ulcer is now marked by a pigmented scar about three centimeters in diameter.

As soon as the first ulcer healed, a similar area showed itself on the outer side of the leg nearly opposite the first. This attack presented precisely the same history as the other, with the exception that the sloughing did not follow the first seizure, and that the area involved was smaller and the duration of the whole attack much shorter.

The third seizure was a small ulcer about three inches below the second, and followed the same course. The fourth attack was the first in which there was more than one area simultaneously involved

These were two small patches, one on the outer side of the left foot and the other at the base of the third toe of the same foot. Both ulcers were small and of short duration. The fifth attack was a severe one, but the patient says that it differed from the others in the fact that no black tissue separated. He describes this as a "white one." It involved the plantar surface of the second toe beneath the third phalanx. This attack was very painful, there was much swelling, and it was six or seven months before the pain ceased and the part was healed. The sixth swelling appeared on the dorsum of the right foot. It was similar to those that have been described, a slough being discharged. The seventh attack involved the dorsal surface of the second toe of the right foot. The patient also describes this as a "white one." It, like the one involving the plantar surface of the second toe, occurred over the first phalanx. It was very painful, and indolent, nearly a year passing before it was healed.

Raynaud's disease, showing typical necrosis of distal phalanx of left thumb. Deformities of the tips of all the fingers are seen, with the exception of the middle finger.

With the eighth attack the hands were involved for the first time. The necrotic area included the pulp of the ring-finger of the left hand, which was discharged, resulting in a contracted, deformed tip of the finger. In this attack, and subsequent ones involving the fingers, it was thought that the nail and the end of the finger would be lost, but in each case the nail was not thrown off, nor did the gangrene involve the bone. The next attack appeared upon the index-finger of the right hand; this was followed by an attack in the little finger of the left hand. The index-finger of the left hand was the next to be involved, and coincidently with this, the little toe of the right foot. The toe nearly amputated itself, the small connection with the foot being severed by a physician. This left an indolent ulcerated surface which has not yet healed. The last, and twelfth, attack was the left thumb, which is now gangrenous. The nail has been shed and a distinct line of demarcation has formed; the sloughed part will include the distal phalanx.

With the exception of these attacks, the patient claims to be in good health. He is by occupation a barber, and has worked steadily at his trade, excepting when the disease has involved the hands to such an extent that he could not use them. During all the years of his disease his appetite has remained good, and he has slept well when the pain attending these attacks has not been severe. He says that he has a decidedly nervous disposition, at times irritable and sometimes emotional. There are no somatic signs of nervous disease. His knee-jerks and station are good. There is no disturbance of sensation in the arms or legs—he feels slight touches—and there is no slowing in conduction. Differences of temperature are detected with the usual precision. The pain sense is not exaggerated nor decreased. The left arm is distinctly smaller than the right, the difference being more marked in the forearm. There is no reaction of degeneration in these muscles, and no apparent atrophy of one muscle more than another.

The pupils, visual field, and acuity of vision are quite normal; there are no changes in the eye grounds, the vessels being of normal size and presenting no irregularities.

The general nutrition of the patient is fair, though his color is not very good. The blood examination was kindly made for me by Dr. W. A. Evans, and shows a percentage of hemoglobin of sixty-four. The number of red cells is 3,360,720. The percentage of red cells is sixty-seven, and the corpuscle index is ninety-five. The white cells number 10,290.

The examination of the urine shows a specific gravity of 1022, slightly acid reaction, and no sediment. There is no sugar and no

albumin. Hemoglobin was not found; this substance is not infrequently met with in the urine of these patients.

The heart has a weak impulse, the apex being felt a half-inch to the right of the nipple line. The sounds are normal. There is no radial or ulnar pulse to be felt at the left wrist. The right radial pulse can be felt, but it is very faint, and slightly less distinct than the right ulnar pulse. The carotid, subclavian, and brachial pulsations can be felt and are symmetrical. The examination of the lungs and the abdominal organs was negative.

This case resembles closely Raynaud's disease; it cannot, however, be included among the characteristic types of that affection. It is impossible in the description of the patient to identify the three stages of local syncope of the surface, hyperemia and local asphyxia. In some respects the case resembles erythromelalgia. The pain was greater than commonly occurs in Raynaud's disease, and the redness accompanied the swelling and preceded the death of the part. There are typical examples of erythromelalgia complicating Raynaud's disease. The distinction is not an important one, as both conditions belong to disturbances in the innervation of the smaller arterioles. The main thing that we should bear in mind in the diagnosis of these cases is to distinguish cases of gangrene due to thombosis, and which are accompanied with marked vascular degeneration. Undoubtedly some cases of this kind have been labeled Raynaud's disease, not maintaining the distinction so strongly insisted upon by the author who first described this affection.

The most notable things in the history of this patient are the great number of attacks, twelve, their extent over a period of nearly eight years, and their occurrence in only two instances simultaneously in two parts; in every other instance the preceding attack was completely healed before the following one appeared. The severe attack of malaria which is described in this case is not infrequent in the history of this disease. Just what relation it has to the development of the disorder cannot be stated, but it is a significant fact that severe malaria is to be found in the history of so many of them.

The absence of left radial pulse, and great diminution of the right, may be due to anatomical peculiarities entirely apart from the disease; it is, however, a significant coincidence. The difference in the size of the two arms is greater than would be accounted for by the mere disuse during the last few weeks that he has had the painful thumb. The left arm appears somewhat colder to the touch, but a measurement of the surface temperature shows it to be equal in both arms.

A CASE OF TRIPLE FRACTURE OF THE FOREARM; COMPOUND FRACTURES OF RADIUS AND ULNA UNITED WITH SILVER WIRE.

BY CHARLES W. HITCHCOCK, A.M., M.D., DETROIT, MICH.

On the afternoon of May 9, 1899, J. S——, a well developed boy of fifteen, was running a rapidly revolving buffing-wheel, when in some manner his sleeve became caught and so quickly carried his left arm around the revolving shaft that it is quite impossible to tell anything about the lines of force exerted thereon. The result was a triple fracture with lacerations of soft tissues.

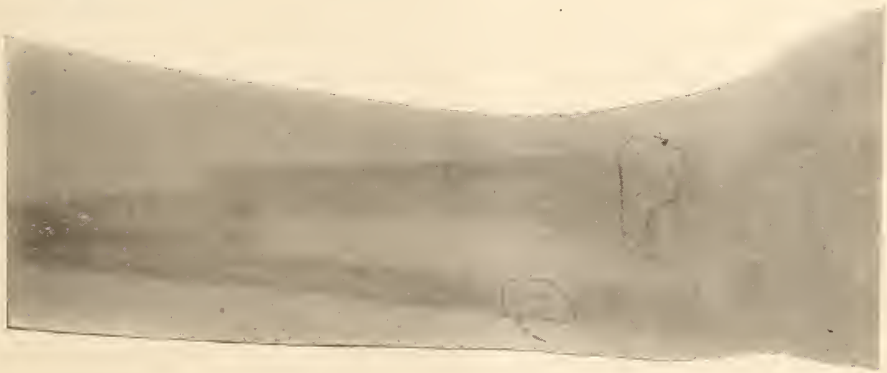
I first saw him with Dr. F. L. Newman, at eight o'clock the same evening, at Harper Hospital. Careful examination was made under chloroform, when the following conditions were made out: There was a jagged, transverse fracture of the left ulna, at a point about two inches above the wrist, the lower end of the upper fragment protruding an inch and a half through an extensive laceration of the soft tissues, denuded of its periosteum for that extent. The laceration involved the soft tissues to some extent on the anterior aspect of the wrist, extending upward and backward on the ulnar side to a point at least an inch and a half above the seat of fracture. One tendon was torn loose from its insertion, and the other soft tissues were badly lacerated.

The fracture could be easily reduced, and even exactly coaptated, but it would remain so only as long as held in place, the ends lying far apart when not held by the operator. The condition of the radius was next investigated, and a fracture could be made out apparently involving the wrist-joint. There was evident displacement of the fragments, and the fracture was apparently in some manner impacted, for neither by extension, rotation, nor other manipulation were we able either to effect a reduction of the fracture or to cause any motion at its site. Very careful examination failed to impart to my mind any clear idea of the exact relations of the parts, which were only made plain after I had made an incision on the radial side of the wrist sufficiently long to permit of adequate examination.

This peculiar condition was then found: The lower end of the radius (a fragment from an inch to an inch and a half long) had been broken off obliquely, when the upper fragment had evidently been so forced down upon the lower as to fracture it longitudinally into two halves, between which the lower end of the upper fragment was so forcibly wedged as to require considerable force to pry it out. This done, the lower fragments did not assume such position as to make it at all certain that any good apposition or union could be obtained, although mechanical means could secure an excellent coaptation of

the three fragments. Silver wire was chosen as the best agent; the lower two fragments were so drilled that they would be held to each other, and the same wire was passed back through the lower end of the upper fragment, secured, and ends twisted and cut short. The external wound was closed with sutures of silkworm-gut, the ulnar fracture similarly secured with silver wire, the wounded soft tissues united with silkworm-gut, and the whole forearm dressed on an anterior metallic splint; the third fracture, at the junction of the upper and middle thirds of the radius, being apparently easily and perfectly reduced, lying in the splint without any evident displacement.

Recovery was rapid and uneventful. To my surprise free motion of the fingers was painless almost from the first, and early and excellent motion of the wrist-joint, which I had naturally expected would be restricted, was secured without difficulty. He is now doing his usual work, and tells me (October 9, 1899) that he can now lift as much with the left arm as with the right, and use it about as freely. Supination is apparently the only motion impaired, and that but very slightly indeed.



The radiograph was taken on June 23, when there was solid and perfect union of fractures and soft tissues. It shows both silver wires in position very clearly. The patient still wears the radial wire; the end of the ulnar wire was left rather long, and eventually came so near the skin as to irritate, and I was able to cut down upon it, untwist it, and remove with but little difficulty.

The case is deemed worthy of report because of the unusually perfect result. The radiograph adds also some little interest, and the appearance of the patient's arm speaks for itself. Examination would hardly arouse suspicion of the overlapping of the upper fracture, which is shown so clearly by the radiograph, which was kindly taken for me by Dr. P. M. Campbell.

WORK AND OVERWORK.

Among the multitude of pleasant and profitable acquaintances of the Successful Practitioner who is also Something of a Philosopher, there is none surer of a warm welcome at his office door than one the idea of whose personality can be best conveyed to those who do not know him by the improvised name of the Square-Minded Business Man. The philosophical practitioner was as usual glad of his afternoon call not long ago, but somewhat surprised when assured that neither himself nor any member of his household needed medical or surgical attention, and that the visit was purely recreative and social in nature. "It is hardly as yet the end of the busy season in the business in which my friend is engaged," at first speculated the physician to himself, and the thought in his mind was sufficiently evidenced in the greeting to call forth this response:

"I guess you are a trifle behind in your time reckoning. In truth, the rush season is just over, and this semi-interregnum gives me an opportunity to feel my own pulse, and assure myself of my former place in the memories and good-will of my friends. I labor almost in vain to convince some of my associates that a time of slackness is best spent in this manner, not in attempting to force greater activity than the occasion requires. If, however, candles were made in the form of a cross, many people would go the old proverb one better and burn them at the four ends; so when words fail, I usually give up talking, and strive to set them at least a good example. Perhaps the ceaseless contact and trend of affairs during the past twenty-five years in this country, in all lines of industry, especially those within that period brought into being, has led the present generation to consider any temporary slackness as a forerunner of stagnation and disaster, rather than as a natural back-swinging of the commercial pendulum, due to a number of influences of which the heated term is, by common consent, accounted chief. To my mind this is a perfectly safe and logical phenomenon—a healthy reaction from the greater activities of the other seasons, and a natural safeguard against overworking the machinery of life. Sundays and the occasional holidays are not enough for complete relaxation and recuperation in these days when the demon of rush and hurry seems to have taken possession of the body politic. The rest afforded by these temporary respites is not long enough to be of the utmost practical benefit, and often one returns to the office or other place of occupation to recover from the effects of overdoing in some other manner. On the other hand, the occasional interregnum spans a generous part of a whole season, and without stopping the complex machinery of business altogether it

allows a slowing down, whose benefits when viewed aright may almost seem to balance its detriments."

"The real difficulty," replied the Philosophical Practitioner, "is that too many people, especially those in callings depending upon personal energy and ability alone, keep ever before their minds' eyes a vision of activity and worry, occupying either side of a balance, so delicately poised as to be affected by every natural or unnatural influence, and which, through faulty sight, may appear to be moved under imaginary or supernatural impulses. In such case, when the side corresponding to activity is the heavier, worry is lifted far above the head and the heart, spirits are high, and all seems to go well; but when this condition is reversed, the energies theretofore spent in pleasant and profitable activities seem to waste themselves in needless worry rather than to rest themselves and their possessors for better subsequent work under improved conditions. To the worry-burdened mind the annual interregnum comes as a double trial, for the unfortunate man loses the natural compensations of the dull season, and not only that, but he draws upon his physical and mental resources much more severely than he would in case the wheels of trade were kept ceaselessly running. 'Whatever is unnatural is wrong,' and the weariness of body or mind which proceeds from any other source than an excess of normal activities is as wrong as it is wearying. A suggestion to send the chronic borrower of trouble into hibernation during part of the midsummer months would probably be regarded as paradoxical, but sometimes good may ultimately come from a disciple of 'paradoxy.' The best hibernation is that to be had under cover of the northern forests, by the sides of fringed lakes and streams, and on the mountain tops; but when nature's influences are unequal to the task of keeping one's spirits up when activities slacken, hibernation might be employed as a blessing, though in the guise of a curse."

"Perhaps," answered the Square-Minded Business Man, "you are too harsh in dealing with those people who exhibit more of the spirit of restlessness out of than in the harness. Well-balanced men work because they cannot help it—activity becomes second nature to them—and even when a natural dulness comes, they feel like fishes out of their element, and give apprehension the place normally occupied by planning and aspiring. The writer of the 'Point of View' in *Scribner's Magazine* recently analyzed this condition with excellent effect, and some of his points still stick in my memory. There is a great deal said about the American tendency to overwork. We are told that we ought not to put such strains upon ourselves; ought to make our ideals simpler and more easy of attainment; ought not to want so much; ought, in other words, 'to take a little more care

to not kill ourselves for the sake of living.' We are not accustomed to advise a man going into battle to be careful of his life, and to think earnestly about not getting hurt; nor do people generally say to a man whom they suppose struggling toward moral excellence that he ought not to desire to be so much, ought to simplify his ideal, and be content with less. There are large classes of men doing excellent work in every line of human endeavor to-day who would smile at the advice giver if they were told to 'take a little more care not to kill themselves.'"

"I agree with the accuracy of your observations rather than with the spirit of your contentions," interrupted the Practitioner, "for from one side of this globe to the other the active, dominant, and ambitious races of men and women are overworking. In this country especially our great lawyers, busy bankers, eminent physicians, but more especially business men, are doing a tremendous amount of work with very infrequent and insufficient respites. The leisurely days seem to be over wherever the Anglo-Saxon and the Teuton have carried their native activities; people have learned to consult watches and catch trains at certain times as a part of their daily programmes; the telegraph has placed us in almost instantaneous communication with all the globe, and our bankers and business men are in every-day touch with the world currents of finance and commerce. I sometimes ask myself if we are, after all, any wiser than our forefathers and the less energetic peoples of to-day, in spite of our innumerable inventions and appliances for the annihilation of time and space and the accumulation of wealth. In my opinion this question is open to some debate. The increased necessity for hard struggling involves extra work for some one or another, and not infrequently it falls upon those least able to support the strain. This is an age of overwork in the history of the world, for even in the pursuit of pleasure we see men and women continually overdoing it, as though the exigencies of living afforded insufficient leisure for its respites to be fully appreciated. Overwork is, too, generally synonymous with overworry, both of which are very undesirable conditions of existence, and most carefully avoided by one who wishes to retain his nervous energy, which is one of the most necessary qualifications for success nowadays. 'Three things,' observes Chauncey M. Depew, 'surely happen to the man who works steadily and without relaxation. In the first place he becomes nervous, irritable, and hard to get along with. In the second place the grade of his work falls off, and he is liable to err in his judgment. In the third place he dies prematurely and suddenly.'"

"Again leaning upon my anonymous friend, the writer of the 'Point of View' in *Scribner's*," continued the Business Man, "I

should say that the man who has become a spendthrift of his own physical and mental resources while doing his best to increase the well-being and the opportunities of his family, or who, having already accomplished this to a reasonable extent, keeps on in the very same way in the conduct of a great business or profession because tens or hundreds or perhaps thousands are dependent in a greater or less degree upon it, or even because he has come to have a fascination for the machinery to which he so long ago put his hand, fulfils a much better ideal than individually 'wanting less' or being content therewith. If he has helped to set the pace swifter for other men, he has contributed to their strength to bear it. If he has added to the 'complex demands of an intricate civilization' (they are never to be lessened, by the way, without the civilization going also) he has contributed something toward meeting them. His method is certainly much better than doing nothing and talking senselessly about conditions from which he is apart. Give him sympathy in the universally strenuous conditions of life, if you like; wish him all the aids of happy temperament, philosophy, association, etc.; but do not hold him up to scorn as one with wrong conceptions of the ends of living until you can be sure that the 'taking care of himself' to which you counsel him is better for his individual case than the chosen way. There are unnecessary and ridiculous extremes of overwork, like a mania, which I would not seek to justify. These are generally to be condemned on other grounds than that they risk life. But as a rule the great multitude of men in business or professional pursuits, the intensity of whose work is under discussion, are endeavoring according to their several lights to attain the ends for which the unsparing sacrifice of their lives and talents is justifiable, and even praiseworthy; or in those rarer cases, in which they are doing their work because they cannot help themselves, are adding their mites to a civilization which, in spite of our moments of despondency and rebellion, we know is higher and better for all the amenities and refinements it accumulates."

"'It is not the load, but the overload, that kills,'" answered the Practitioner. "The camel totters along very well under its great burden, and in due time would reach its destination; but the foolish driver lays another straw upon the load, and the camel's back is broken. The tendency of the average American is to attempt to carry the last straw. We are not content with doing a great deal; we would do a great deal, and a little more. The 'little more' is the bane of many lives. A machine will stand a certain limit of strain before it breaks; but we use our patient bodies and tax our long-suffering brains as though they possessed a continuous power of rejuvenation, a vitality always enduring. We forget that we are the most

intricate and delicate of machines ourselves, and that our limitations of endurance are fixed and should not be overstepped. 'I have never found the limit of my capacity for work,' Napoleon Bonaparte is reported to have said in the height of his victorious power, but critical history tells us of his weakness and even terror at many times, especially on the heights of Borodino, where only the superb courage and tactics of his generals saved the invading French forces from tremendous defeat at the hands of the Russians. No human being has even the shadow of unlimited physical and nervous power. The overload appears in various forms, but least frequently of all in mere physical overexertion. A kindly dispensation of Providence provides that when the body is taxed unduly by manual labor, nature protests in the sensation of fatigue, and the worker stops of necessity. Consequently few men go to their death by manual labor.

"But it is in the mental strain that the overload manifests itself most frequently; and herein lies the concern of the business and professional man. The brain, unfortunately, does not exhibit the sense of fatigue with the same urgent insistence as the body, and can be driven farther under the whip. And many do drive it unmercifully to their ultimate undoing. The French and Germans, and indeed most European peoples, order their lives differently. They work fewer hours, do not strain so tensely in their working, take longer hours of recreation and rest, and leave the office behind them when they close its door. An American too often follows Stephen Girard's habit, and takes his business to bed with him. It seems impossible for him to throw off his business or professional cares with his office coat, but he must take them home with him and set them up as a barricade against the affections and sympathies of his wife and children. The inevitable accompaniment of overwork is, as I have before intimated, overworry. It is worry that sends men to their graves by the thousand, ten or twenty years before their time. It is the demon of worry which sits beside the proprietor in his office, that draws the deep furrows across the foreman's face, and chalks out the native pink from the cheeks of the young. If one would avoid the penalties of worry, he must first heed the limitations of nature and stop short of overwork. Life is too short to load it down too heavily with care. There is no pleasure or comfort in the sense of great possessions, if secured at the expense of all that is best in life. Profitable results may be obtained from a temporary slowing down of the machinery of an industry, but only in case the engineers and the workmen will that it shall be so, and decide to govern themselves accordingly. The balance already noted—activity *vs.* worry—must be held every man for himself, and happy is he who knows how to keep the worry end high in the air over his head when

the activity end is temporarily sent up by circumstances over which he has no control."

"One thing I note with great interest and satisfaction," interposed the Square-Minded Business Man, "and that is the conviction among the keenest managers of the age that scientifically planned overwork, performed either by employers or employees, one form of which is night-work, does not pay. As a class we acknowledge the principle, but practice the error until it is figured out before our eyes an actual loss, and then we stop it. The latter point is finally and fully reached in the evolution of modern industry. The disadvantages of being obliged to work at night are many and obvious. There are some operations which cannot be so undertaken at all, if due regard is to be had to quality of work, and others that had better be left undone. The bulk of night-work is of such a nature that if so accomplished it involves an increased cost out of all proportion to that of day-work. This year many manufacturing establishments have been compelled to work overtime. This has been particularly true in the metal industries. In some instances the extra work is performed by the day forces during two or three hours in the evening; in others the pressure is so great as to require two separate gangs—one for the day and the other for the night. The advantages and disadvantages of this method are questions which every employer of labor is compelled to study. He must consider both sides of the problem, weigh the good and the bad factors, and then reduce the influences of the latter to a minimum, when they are a necessary evil which he must face, and without which he cannot do business in these bustling times. Whether or not any advantage is secured in the form of increased profits through night-work and its added outputs is a question to be answered differently in different lines of experiment. In some industries the profit is larger than it would otherwise be; but in others the augmented cost of producing is sufficient to wipe out the gains made during the day, and if this point alone is taken into consideration, the manufacturer often finds that he has conducted his business for the satisfaction of holding his custom rather than for additional profit.

"A careful inquiry made by me among machine men shows a wide divergence of opinion upon this question. Its mechanical side is most diversified and interesting. The output is less, hour for hour, during the night. Perhaps the only exception to this is when the work performed is almost entirely by strictly automatic machinery, or of such a character that the operator becomes, by reason of constant repetition, an animated machine of the automatic type. In the ordinary mechanical establishment, where the work is more or less

varied, the average output is invariably less at night. This is found to vary with the kind of work done and the quality or accuracy demanded. Even 'setting' the work, or the mere act of placing it in the machine, cannot be performed as expeditiously at night. The conditions are different; the light is poorer, even in the best shops, and the man himself is tired, and does not possess the vim and energy he has displayed during the day. A machine tool-builder of my acquaintance has studied his men and their work most thoroughly. At first he attempted to keep them until eleven o'clock every week-day evening, but the result was lowered quality and proportion of quantity. The hours were then reduced until ten o'clock, but with only slight improvement. Under the next plan the men were employed every other night until ten. This was in every way the best plan so far tried, but so unsatisfactory was the whole under-taking that he began the policy of overbidding on extra work offered him, practically refusing more because it would necessitate running at night. In his case it did not pay under any of the conditions tried. It has been ascertained by more than one manufacturer that two gangs of men, equal in every respect, will not perform the same grade and amount of work day and night. The superiority is always found on the side of those working only during the daytime. This holds good in machine shops equipped with every modern appliance, as well as in those in every way behind the times. The mechanic is not a nocturnal animal, and is at his best during daylight.

"Indeed, it may be set down as a general principle that work done in overtime is overwork. And it is certain that this kind of work does not pay. There may be some temporary profit from it at the outset, but in the long run there is not only no profit in it, but in most cases an actual loss. I suppose most men think there will be an exception in their case—that they will stand it anyhow; but the time is sure to come when they will discover that the earth keeps right on turning just the same; that natural laws are not suspended on their account; that, in fact, there is no exception in their case, and that if they crowd themselves too hard they must pay the penalty. There are, of course, situations in which any one of us may expect to turn loose and work without regard to time, but every man knows when these occasions arise. Neither is a man profited by making himself a machine to be governed entirely by the clock. It won't do him any hurt to begin a minute or two before his regular time, and when he works he ought to accomplish all that is reasonably possible; but when he has done a good hard day's work he ought to stop. In the long run 'too much work makes a shirk.' A fresh and vigorous person can do more in eight hours than a tired one can do in twelve. And he has this

further advantage that he keeps on edge, while the weary one is all the time becoming more wearied, and his energies are being drawn out more and more. In this condition the worn-out man may be useful as an object-lesson to others, but he will not be of much use or comfort to himself."

"The thoroughly overworked man is a study of mine, and I will venture to describe him briefly to you," continued the Practitioner. "Of course, I mean the genuinely overworked men, not those who always act overworked because any duty at all is more than they can attend to without fatigue, but the genuine article, the product of the tremendous activity of the age. Sooner or later he finds that his day's work has become an effort, a toil rather than a delight. The last hour has become a strain only maintained through determination; a sense of exhaustion and fatigue envelops the close of the day or week; the last columns of figures present difficulties hitherto unknown, and the last pile of letters seems more trying than formerly. Anything new, of an unwonted character, making special demands upon the higher faculties, becomes arduous and distasteful, revealing the fact that the mental powers are commencing to announce their inability, while routine matters, which have become almost automatic, or habitual, can still be effectively discharged. But in time even these lower processes are affected, and the last half-hour at the office is a distinct trial, and followed by a new sense of exhaustion. There is a certain amount of irritability combined or uniformly associated with the exhaustion of nerve matter—an irritation sometimes simulating exaltation, marking the commencement of nervous failure. And while work seems to have become more irksome, the usual sources of pleasure no longer afford their wonted solace and satisfaction. There is a heightened susceptibility to trivial annoyances; domestic trials and inconveniences are felt more keenly; there is a feeling of necessity for rest, and a more distinct craving for comfort and quiet, though none seems forthcoming. There is an emotional exaltation which reveals the fickleness of the exhausted nerve centers; the newspaper is stupid and uninteresting; the piano needs tuning; servants are incompetent and growing all the time more so; children are less obedient, and wives less sympathizing than of yore. The mind is as sensitive as is the skin after a blister; the slightest touch produces pain.

"The pith of the whole matter lies in the injunction, 'Work like a man, but don't be worked to death.' The American mind and frame are happily so constituted that work is natural to both of them, and a great deal easier than idleness. Persistent and continuous industry is indispensable not only to their prosperity, but also to their happiness;

and if we could critically inquire into all cases of breakdown through overwork of which we hear, it is altogether probable that we should find as the overwhelming cause not the amount of work accomplished, but rather the manner of its accomplishment. It is safe to say that the American takes less care of himself than any other civilized human animal in the intelligent zones. It is only within the present generation that great classes of our people have learned how to eat, and a very large proportion are still ignorant of this art, just as so many business men do not yet know how to sleep, and, most assuredly, do not take sufficient exercise. The man who has broken down through excessive labors will be found, in nine cases out of ten, to have been poorly nourished; in other words, he has not taken proper care of himself. He has permitted his business to be crowded by ambition beyond his reasonable capacity, and has precipitated endless and needless worry upon himself. He has not been satisfied to build slowly and surely, but has 'hustled' and 'rushed.' He probably stands on an insecure footing, and he knows it. His way of work is bad. If he breaks down it is worry that kills him, not so much work; and his worry has prevented sound sleep and good digestion. I venture the assertion that in nine cases out of ten where American business men have failed physically or mentally, an analysis would show that sleepless nights and poor digestion, causing loose habits of work and life, have been the cause. It is not work but worry that kills; work as hard as you can, but don't worry, and you may live until you are sorry."

A DEPUTATION of the chief magistrate and Town Council of Berlin waited on Professor Virchow October 20 last, and congratulated him on his fortieth anniversary as member of the Berlin Town Council. Virchow was greatly overcome by the unexpected ovation, and after thanking the deputation for the honor done him, said he regarded communal activity as the first duty of the citizen next to the care of his family, and he was proud to have been able to fulfil this duty to the satisfaction of his fellow citizens for so many years.

THE following anecdote of Virchow has of late been going the rounds: He was examining a medical student who had remained dumb to question after question until asked, "Is regeneration of the brain possible?" when he energetically replied in the affirmative. "Well, then," Virchow observed, "there is hope for you yet."

THE MEDICAL AGE.

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EDITORIAL ARTICLES.

INTESTINAL MICROBES AND DIGESTION.

There has, not without show of reason on either side, existed some contention as to the part played by intestinal microbes in the physiology of digestion, and numerous investigators have advanced the opinion that the organized ferments of bacteria are as much essential factors of digestion as are the enzymes and unorganized ferments. A large number of unicellular organisms doubtless normally exist in the human body, and on their multiplication in the intestine much in the physiological sense may depend. The formation of indol, skatol, cresol, and phenol is probably due to changes in antipeptone produced by bacteria, but this should not confirm belief in the necessity of bacteria being present for the complete physiological decomposition of albuminoid substances.

The effect of cooking and the hydrochloric acid of the stomach are to render the chyme entering the duodenum free from bacterial life. Bacteria in the intestine, though normally present, must be regarded as parasites, and if present in sufficient numbers may derange nutrition by turning to their own uses the products of normal digestion. If it is contended that these bacteria are beneficial, it can only be asserted that parasitism is never beneficial. Intestinal microbes may be comparatively harmless. They may be present in the normal intestine, just as vermin may be guests of the majority of the human race, but their ultimate use cannot be otherwise than that of vermin, to teach mankind the advantages of their absence.

It has been demonstrated by Nuttal and Thierfelder that young animals with sterile alimentary tract, with sterile air and sterile food, grow as well as others under ordinary conditions. Animals thrive not because of bacterial invasion, but in spite of it.

It is probable that any extensive bacterial decomposition of carbohydrate occurs in the large intestine. Under the influence of putrefactive bacteria profound changes may occur. The proteids are especially liable to decomposition, the alkaline reaction of the large intestine not affording them the protection accorded them in the acid secretions of the small intestine. It has in no sense been proven that bacteria here or elsewhere exercise any beneficial influence.

EDITORIAL NOTES.

Another Medical Abuse.

Dr. G. Frank Lydston's eloquent pen places the medical profession under indictment by reason of the growing tendency that surgeons and general practitioners are manifesting to divide "the swag." It has become known to him that there are actual associations of individuals for referring patients to particular surgeons on account of some "divvying" arrangement that exists between them. This is of necessity an abuse difficult to reach by expedients available to the profession. In dealing with the question there is certainly a field for suggestions. There is occasionally an echo from the other side which is not to be entirely ignored. A country doctor will bring a patient for an operation to a specialist, and the specialist makes the situation such that the patient and his attendant have almost to walk home.

The Doctor's Pay.

The *London Spectator* has been considering the question of the remuneration of medical men. It maintains that the doctor remains the only man who is habitually swindled and whose charges excite a preposterous amount of annoyance. The article concludes by saying: "We want the doctors to be as educated as the barristers, as devoted as the clergy, and as well paid as saloon-keepers." It would indeed be more than a realization of splendid dreams if doctors could be paid as well as saloon-keepers, or half as well as prize-fighters.

ITEMS AND NOTES.

SURGEONS are needed in the navy.

THERE is not a physician in Guam.

RUSSIA has 3000 surgeons in her army.

DIPHTHERIA of a malignant type has broken out at Herkimer, New York.

IT is feared that the famine in India will affect a larger area than that of 1896.

NEW cases of yellow fever continue to be reported from Miami and Key West.

SMALLPOX is reported to prevail to an alarming extent in many parts of Texas.

AN antituberculosis league has been formed among the physicians of the Argentine Republic.

AN alarming increase in the number of cases of infectious disease is reported from Liverpool.

A NEW hospital is to be built on the grounds of the University of Virginia. It will cost $25,000.

A SANATORIUM for consumptive soldiers at Fort Bayard, New Mexico, was recently opened.

A SANATORIUM is being erected by the Germans at Davos, in the Engadine, to cost about $60,000.

The Lancet is seventy-six years old, the first number having been issued on Sunday, October 5, 1823.

BY the will of the late ex-Justice Charles P. Daly, $5000 is left to the Northern Dispensary of New York.

THE medical and nursing staff of the British army has been reenforced by a large number of civil practitioners.

SINCE 1882 venereal disease in the British army has increased fifteen per cent, as shown by the official records.

MR. WILLIAM WALDORF ASTOR contributed $25,000 to the British Red Cross Committee for use in the Transvaal war.

THE American women residing in England are fitting out a hospital ship to be used in the war in the Transvaal.

THE hospital at Sagua la Grande, Cuba, collapsed on October 22, killing four patients and wounding twenty-seven.

PLANS and specifications have already been drawn for the building of new laboratories for the University of Pennsylvania.

"DIVINE HEALER" SCHRADER visited Altoona, Pennsylvania, recently, and was advised by the Mayor to make his stay short.

ACCORDING to statistics Spain has 3000 hours of sunshine a year, Italy 2700, France 2600, Germany 1700, while England has but 1400.

IF the city council of Baltimore does not give the city dispensaries any money for next year, it is threatened that these dispensaries will be closed.

SINCE the opening of the Chicago public schools nearly 2000 cases of diphtheria and scarlet fever have been reported to the Health Department.

THE Johns Hopkins University will send an exhibit to the Paris Exposition. The exhibit will include a full list of reports and hospital journals.

THE French Government is watching carefully all vessels that come from infected ports in Portugal or Spain, where the plague has appeared.

THE number of medical journals published in Paris was 186 in 1897. In 1898 these had increased to 206, and at the present time they number 215.

SEVERAL philanthropic women of Montreal have formed a society whose aim shall be the prevention of the heavy infant mortality among the poor of that city.

THE Alvarenga prize for 1899 has been awarded to Dr. Robert L. Randolph, Baltimore, Md., for his essay entitled "The Regeneration of the Crystalline Lens—An Experimental Study."

ACCORDING to the will of the late Cornelius Vanderbilt, St. Luke's Hospital in New York City will receive $50,000, and the Newport (R. I.) Hospital $10,000. Yale University will receive $100,000.

THE new Institute of Physiology at Vienna was formally opened last month with appropriate ceremonies, presided over by Prof. S. Exner, the superintendent, and Zuckerkandl, dean of the medical faculty.

THE government recently placed with a wholesale drug house an order for 7,500,000 grains of quinine in 5000 bottles, each bottle containing 500 three-grain pills. The award was made to the lowest bidder.

IN Vienna, recently, a robust young woman died with symptoms of poisoning ascribed to a green-silk waist. The perspiration made the color come out under the arms, where there happened to be some pimples.

MRS. SALLY BATCHELDER, of Peabody, Mass., celebrated her one hundred and fifth birthday on August 8. She is reported to have recovered from a fracture of the leg which she sustained in her one hundredth year.

THE Princess of Wales has placed at the disposal of the Red Cross Society a considerable sum of money, the remainder of a fund collected at the time of the Soudan campaign in 1885, for the equipment of a hospital ship.

SIR WILLIAM MACCORMAC, President of the Royal College of Surgeons, has volunteered for service in the medical department of the British army in South Africa. His position will be that of consulting surgeon with the forces of Gen. Sir Redvers Buller.

ACCORDING to the *Journal de Médecine de Paris* of July 2, 1899, Dr. Spaak, of Brussels, has obtained excellent hemostatic results from a mixture of two parts of chloroform with 100 parts of water. This mixture is said to rapidly arrest bleeding after tooth extraction.

DR. DOMINGOS FREIRE, of Rio de Janeiro, is dead. He was one of the first to announce the discovery of the specific microbe of yellow fever, and he also made a prophylactic and curative serum for which he claimed great efficacy. He was director of the Bacteriologic Institute at Rio.

RICHARD GRADY, M.D., D.D.S., has been appointed dentist to the United States Naval Academy at Annapolis, at a salary of $1600. There have been but two incumbents of the office since the founding of the Academy in 1845, Dr. Walton, who resigned, having served since 1856.

ON October 18 last there was unveiled and dedicated in Greenridge Cemetery, Saratoga, a monument erected by the Daughters of the American Revolution to the memory of Reubena Hyde Walworth, who died of disease contracted while nursing soldiers at Montauk Point a year ago.

In order to guard against the plague Surgeon James A. Nydegger and Assistant Surgeon John F. Anderson of the Marine Hospital Service have been ordered to Spain to assist the Cadey at Barcelona to reenforce the quarantine regulations of the Treasury Department regarding vessels bound for the United States.

A short time ago a child four years old, residing at Locust Grove, Pennsylvania, was bitten on the cheek by a dog. Although the wound healed promptly the child became restless, would snap at imaginary objects, and rapidly became worse, finally suffering severe convulsions requiring forcible restraint to keep her in bed. She died a week later.

A law rendering insurance against illness and accidents compulsory in Switzerland has been adopted almost with unanimity by the National Council. It is proposed that the Federal Government should subsidize the insurance by a sum of about eight and a half million francs yearly. If the bill passes the State Council it will probably be submitted to the referendum.

During September the Paris Municipal Laboratory made 653 analyses of wines, with the result that 139 were judged good, 221 passable, and 196 bad. Of beers 39 were good, 29 passable, and 14 bad. Spirits were declared good in 132, passable in 31, and bad in 23. When we turn to foodstuffs proper the result is less satisfactory, for the analyses of milk gave only 121 good, with 102 passable, and 201 (!) bad; while of 73 samples of meat, 53 were good and 20 bad.

One of the late suggestions in Germany, says the *Philadelphia Medical Journal*, to secure for the young practitioner a more practical idea of his duties, is to require that every candidate spend a year in a hospital or with an approved private physician as assistant before he is allowed to practice for himself. At present very few of the young physicians have more than a theoretical and scientific knowledge of medicine; and their application of general rules for the first few months is apt to produce weird results. This new requirement would so increase the difficulties in the way of a medical education that it is doubtful if it passes beyond the suggestion stage.

According to the *Philadelphia Medical Journal*, at the late Congress of Physicians, held in Munich, the Hofbibliothek (one and a half million volumes, and at least 183 medical publications on file) issued a little booklet giving the contents of an exhibition of medical manuscripts and autographs, which they had prepared in honor of the meeting. Herein we find enumerated MSS. of Hippocrates, Galen,

Celsus, Honein, Abbas, Avicenna, Abul Hasan, etc. The fifteenth century treatise of Hermann Schedel (died 1485), of Nürnberg, on the pest has also a present interest. In all there are 104. The autographs vary from those of Agassiz, Cuvier, Goppert, to Zimmerman's (1728–1795).

THE following amusing tale was recently told to his class by Professor Comstock, of Cornell (*Medical Record*), in speaking of the trials of scientists. It appears that a professor of invertebrate zoology in a sister university wished to produce some trichinous pork for purposes of experiment. The learned scientist went to his butcher and asked him if he ever got any measly pork. "Sometimes," the butcher cautiously answered, "but I always throw it away." "Well," said the professor, "the next time you have any I wish you would send me up some," meaning, of course, to his laboratory. The butcher, although somewhat taken aback, said that he would. Three weeks passed, when the professor, growing impatient, again visited the store. "Haven't you found any measly pork yet?" "Why, yes," said the butcher, "I sent up two pounds a week ago." A sickly grin broke over the professor's face. "Where did you send it?" "Why, to your house, of course," said the butcher.

A DEMONSTRATION of color photography at a recent meeting of the College of Physicians of Philadelphia opens, says the *Journal of the American Medical Association*, vast possibilities in the way of its application to medicine. By taking photographs of colored objects through red, green, and violet glass, and properly superimposing the images, it is possible to accurately reproduce all of the various hues of the original. In this way may be demonstrated normal and morbid specimens, cutaneous lesions, and all varieties of clinical and pathologic manifestations of a physical nature. As yet, success has not been obtained to a practical degree in making permanent printed reproductions, but it seems an easy transition from the present stereoscopic views to colored pictures. The instrument described is known as a photochromoscope. The suggestion was made as early as 1861 by an English scientist, Clerk-Maxwell, that three photographs representing the three fundamental colors could be optically blended so as to reproduce a photographic image, showing the colors, as well as the forms, of objects; but this seems not to have been successfully adopted until 1888, when Frederick Ives perfected devices that have finally led to the development of instruments by which the desired end has been attained. The same principles are also employed in the making of color prints.

NEW PUBLICATIONS.

THE DISPENSATORY OF THE UNITED STATES OF AMERICA.

The growth of the science of pharmacy is admirably illustrated by a comparison of the first edition of the United States Dispensatory, which appeared in 1833, and the present edition, which is the eighteenth. The present work exhibits the laborious efforts of the editors in a remarkable degree. There is no material change in the nomenclature, in the use of weights and measures, molecular formulæ, or atomic weights, since the last revision. The text of the present edition has been very carefully gone over for the purpose of condensation; the botany has been thoroughly revised by Prof. Henry Kraemer. There are several important changes which it is hoped will come over the spirit of pharmacy before a new edition of the Dispensatory is published. Especially must be mentioned the important matter of standardization. The editors of the present volume can be congratulated by the professions of medicine and pharmacy on the completion of their task. The book is one which will meet with a generous appreciation the world over.

The Dispensatory of the United States of America. By Dr. George B. Wood and Dr. Franklin Bache. Eighteenth Edition, Thoroughly Revised and Largely Rewritten, with Illustrations, by H. C. Wood, M.D., LL.D., Joseph P. Remington, Ph.M., F.C.S., and Samuel P. Sadtler, Ph.D., F.C.S. Philadelphia: J. B. Lippincott Company.

DISEASES OF THE EYE.

The fourth and last volume of this system ranks with its fellows in containing so much that is important and instructive to those interested in ophthalmology.

Dr. Landolt's classical essay on Anomalies of the Motor Apparatus of the Eyes is most exhaustive, and coming from such an authority, gives it the highest value to the student of this perplexing branch.

Diseases of the cornea and lens, refraction, and medical ophthalmology are all ably dealt with by men who are conceded as authorities on the branches treated by them.

The editors of this system have every reason to be proud of presenting the best treatise of diseases of the eye that has been published in any language.

R. W. G.

System of Diseases of the Eye. By American, British, Dutch, French, German, and Spanish Authors. Edited by William F. Norris, A.M., M.D., and Charles A. Oliver, A.M., M.D., of Philadelphia, Pa., U. S. A. Vol. IV. With Fifty-one Full-page Plates and Two Hundred and Eleven Text Illustrations. Philadelphia and London: J. B. Lippincott Company.

ANOMALIES OF REFRACTION.

This little book should find a hearty welcome into the library of every one interested in the study of dioptrics. The essay was written more than thirty-five years ago, yet the author's work was so far ahead of his time that the truths laid down by him have been proved by the scientific research of to-day.

The editor has done his part faithfully, and full credit should be given him for not attempting in any way to draw the reader's thoughts away from the beliefs of this talented author.

R. W. G.

An Essay on the Nature and the Consequences of Anomalies of Refraction. By T. C. Donders, M.D., Late Professor of Physiology and Ophthalmology in the University of Utrecht. Revised and Edited by Charles A. Oliver, A.M., M.D. (University of Pennsylvania). With Portrait and Other Illustrations. Philadelphia: P. Blakiston, Son & Co.

LEA'S SERIES OF POCKET TEXT-BOOKS—PRACTICE OF MEDICINE.

The student or practitioner seeking a condensed manual of the practice of medicine will be specially gratified by Dr. Malsbary's volume. The main facts of disease are presented in an accessible form, and the reader is surprised at the facility which has been displayed in eliminating the unnecessary and emphasizing the essential.

Practice of Medicine. A Manual for Students and Practitioners. By George E. Malsbary, M.D. Series Edited by Bern. B. Gallaudet, M.D. Illustrated with Forty-five Engravings. Philadelphia and New York: Lea Brothers & Co.

LEA'S SERIES OF POCKET TEXT-BOOKS—DISEASES OF CHILDREN.

The subject of pediatrics has been presented in orderly and systematic form in this volume of the pocket text-book series. The author has closely followed the lines of the best authorities. The work will admirably suit the needs of students.

Diseases of Children. A Manual for Students and Practitioners. By George M. Tuttle, M.D. Series Edited by Bern. B. Gallaudet, M.D. Illustrated with Five Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Co.

TEXT-BOOK OF PHYSIOLOGY.

This text book is an effort to present the science of physiology in its experimental and superstructural aspects. No volume, the author considers, has hitherto been based upon the advantages of presenting the subject concretely within its own proper boundaries. The author has summarized in his introduction those principles of physics and chemistry which have a general bearing upon physiological science, and he has prefixed to each chapter an abstract of the facts drawn from the three basic sciences of anatomy, chemistry, and physics. Thus the subject-matter of each chapter becomes strictly devoted to physiology. The plan of the work thus adapts itself to the needs of different readers. Not only medical students, but students in literary or scientific institutions, will find the work adapted to their needs. The author of the book is already known from his laboratory guide on Physiology. As a manual of physiology it must be conceded that Dr. Hall's book will take high rank. The general scheme of the work great y commends it to the convenience of students of the science.

A Text-Book of Physiology. By Winfield S. Hall, Ph.D. (Leipzig), M.D. (Leipzig), etc. Illustrated with 343 Engravings and Six Colored Plates. Philadelphia and New York: Lea Brothers & Co., 1899.

KIRKES'S PHYSIOLOGY.

The fact that this is the fifteenth edition of Kirkes's Handbook of Physiology is in itself an adequate testimonial to the value and popularity of the work. In the present revision changes have been made which bring the subject-matter into accord with accepted modern views of the science. The work is clearly and forcibly written, and its arrangement so orderly and complete that there is little doubt of the manual commending itself to teachers and students of physiology. It is well printed and copiously illustrated.

Kirkes's Handbook of Physiology. Fifteenth American Edition. Revised by Warren Coleman, M.D., Professor of Physiology in the Woman's Medical College, New York, etc., and Charles L. Dana, A.M., M.D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School, etc. One Volume, 856 pages, 8vo. Profusely Illustrated by 516 Wood Engravings in Black and Colors, and by Chromolithographic Plate. Muslin, $3.00 net; leather, $3.75 net. New York: Wm. Wood & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Perforation of Bowel in Typhoid Fever.

W. W. Keen (*Philadelphia Medical Journal*, Nov. 4, 1899) summarizes his views on the operative treatment of typhoid perforation as follows:

1. The surgeon should be called in consultation the moment that any abdominal symptoms indicative of possible perforation are observed.

2. If it be possible to determine the existence of the preperforative stage, exploratory operation should be done under cocaine anesthesia before perforation, shock, and sepsis have occurred.

3. After perforation has occurred, operation should be done at the earliest possible moment, provided,

4. That we wait till the primary shock, if any be present, has subsided.

5. In a case of suspected but doubtful perforation, a small exploratory opening should be made under cocaine to detetermine the existence of a perforation, and if hospital facilities for a blood-count and for immediate bacteriological observation exist, their aid should be invoked.

6. The operation should be done quickly, but thoroughly, and in accordance with the technique already indicated.

7. The profession at large must be aroused to the possibility of a cure in nearly, if not quite, one-third of the cases of perforation, provided speedy surgical aid is invoked.

Cancer of the Bowels.

Kraske, at a meeting of the Oberrheinische Aertztetag, held in Freiburg July 20, 1899 (*Munch. Med. Woch.*, No. 32, 1899), read a paper on carcinoma of the large intestine. The disease, more frequent than it would seem from the books, is often overlooked, and intestinal carcinoma should be the diagnosis in many patients who die on short notice from intestinal obstruction (ileus) or perforating peritonitis.

Difficulties in the diagnosis are due to the manner in which these carcinomata present. Two forms are to be considered, which differ as much in their anatomical characteristics as in their clinical symptoma-

tology. First, we have the pronounced papillary type, the glandular cancer which ends in rapid ulceration. This assumes the form of more or less considerable tumors which may be felt through the abdominal walls, and whose intestinal origin is often overlooked because all intestinal symptoms may be missing, especially so when the neoplasm is located high up in the colon. Not infrequently will these cases progress without any noticeable obstructive manifestations and without bloody, mucous, or purulent evacuations.

The other variety of intestinal cancer assumes the form of small, frequently circular, and highly contractile carcinomata. They early give rise to stenotic symptoms, but are so much the more liable to be overlooked, as they occur in patients who are yet well nourished, and with considerable fat in the abdominal walls. Repeated spells of fecal retention, which may even amount to complete intestinal obstruction, especially where there is no history of any trouble having led to cicatricial retraction, should always awaken a suspicion of carcinoma. Intestinal carcinomata are by no means rare among younger individuals. The treatment, of course, is purely surgical.

The Cause of Death from Electric Currents.

R. H. Cunningham (*New York Medical Journal*, Oct. 28, 1899), in closing an article upon this subject, says that industrial electric currents which traverse the whole body transversely or longitudinally in sufficient intensity kill because fibrillar contraction of the heart has been produced, and not, as has been hitherto surmized, by producing a total paralysis of that organ or by killing it outright. Such currents neither kill the central nervous system outright nor paralyze it instantaneously. Death of the nervous system from such currents is due to the total anemia following a sudden arrest of the circulation. In rare instances, when an electric current traverses only the cerebro cervical portion of the nervous system in considerable intensity and for a considerable length of time, it may kill by asphyxia, consequent on a more or less complete inhibition of the respiratory movements, which occurs chiefly during the passage of the current. No existing facts warrant the conclusion that the medullary respiratory center is paralyzed or killed in such conditions.

Treatment of Brachial Paralysis Subsequent to Dislocation of the Shoulder.

In the course of a most interesting clinic bearing upon the pathogenesis of this frequent complication, S. Duphry (*Semaine Médicale*, No. 9, 1899) cautions the reader never in the presence of a dislocation

of the shoulder to neglect mentioning the possible supervention of brachial paralysis, lest he be himself accused of having produced the same by his efforts at reduction. With reference to the treatment he says: "Electrization constitutes the only method which promises any results, and it is often necessary to persevere in the treatment for several months before securing even appreciable results."

The author recalls a case under treatment at the Hôpital Beaujon, and which was deemed incurable, although local applications of electricity supplemented with local douches and massage had been persevered in with admirable patience. It required over six months' treatment before even a slight improvement became apparent, yet muscular contractility gradually returned until a complete cure was effected. Such result is often possible in similar cases, more especially those which manifest from the start a complete or ambiguous degeneration reaction; hence the author's advice to persevere.

Gangrene of the Lung.

A. H. Levings (*New York Medical Journal*, Oct. 14, 1899) says that all cases of gangrenous lung which are progressive and not absolutely diffuse should be operated upon. The gangrenous area should be localized by physical examination, aided by the use of the aspirating needle, and if necessary by multiple resection of the ribs. In the absence of pleuritic adhesions the general pleural cavity should be shut off either by gauze packing or by a row of sutures. After thorough opening and free drainage of the gangrenous cavity it should be cleansed daily by gentle irrigation, and then the cavity should be tightly packed with iodoform gauze.

MEDICINE.

Alcoholism.

Dr. Charles J. Douglas, in the *New York Medical Journal* of October 28, 1899, says that there are few chronic diseases that will more surely yield to proper treatment than alcoholism. He says that the withdrawal of alcohol should be gradual, its place being temporarily taken by such remedies as hydrastine or capsicum, or other indicated drugs. The etiology, symptoms, and diagnosis of alcoholism are well known, but its treatment deserves far more attention than it has ever received. In the acute stages sleep and nourishment are of the first importance, especially if the patient has been on a protracted spree or is showing signs of delirium tremens. If the stomach is too

weak to retain much substantial food, an excellent element is hot malted milk, but the best food in this stage of the disease is egg-nog if the stomach will retain it, and it usually will. There is one harmless remedy that will produce sleep in a few minutes even when the patient is suffering from the wildest delirium. That remedy is apomorphine. It should be injected subcutaneously, and enough of the drug given to produce slight nausea. One-thirtieth of a grain is the average quantity required. Dr. Douglas says that this frequently acts almost as a specific in relieving the alcoholic craving. After the patient has recovered from the acute symptoms he should have a course of tonic treatment covering a period of several weeks. The most potent drug for use at this time is the nitrate of strychnine administered hypodermically.

Functional Cardiac Murmurs.

A. Jacobi, M.D., LL.D. (*American Medical Quarterly*, September, 1899), says that the diagnosis of deranged function in any organ is only a makeshift and justifiable only as long as we are ignorant of the physical cause of that derangement. "Functional" is called the heart murmur, the anatomical cause of which we do not know. That is why a skilled diagnostician may recognize fewer functional murmurs than one who will not diagnosticate a heart disease unless he have all the symptoms, including dilatation and hypertrophy.

The same disorders of the blood and nervous system in which heart murmurs are observed in the adult do not cause them in the small infant. In the latter the heart is larger, more robust, and more powerful, and its contractions are more uniform and effective; its two ventricles are equally muscular, or nearly so, and the valves are smaller. Thus the greater frequency of murmurs in the adult is attributable to the physical condition of his heart, and should not be explained by a deranged function.

Even in the present limitation of our knowledge we should agree to call functional only those murmurs which are temporary, or intermittent, or variable in their character. They are met with in the neurotic and neurasthenic, in the (adult) anemic, sometimes in syncope or in chorea minor, and occasionally in rheumatism. Even here they should be recognized either as myocardial or as neurotic.

Cycling and Cardiac Insufficiency.

Professor Kisch (*Zeitsch. f. Diat. und Physik. Ther.*, Sept. 7, 1899) says that insomuch as it affords a means of exercising the whole muscular system and brings about a sysematized training of the heart

muscle conducive to increased functional efficiency, cycling will prove beneficial to patients affected with a moderate degree of fatty heart, provided there be no functional insufficiency, and more especially to those who are young and stout and lead a sedentary life. In such cases cycling may be practiced under competent medical supervision and in conjunction with the hydrotherapeutic treatment of obesity. However, no riding should be done within less than two to three hours after meals nor immediately after bathing or drinking the mineral waters, and when on the wheel patients should never exceed a pace of eight kilometers an hour, nor go more than twenty to thirty kilometers in any single day, nor attempt a gradient of more than three per cent.

Cycling, however, is to be deprecated in the anemic varieties of obesity and in cases of arteriosclerosis with a concurrent tendency to cerebral hemorrhage, while the wheel should be prohibited to patients affected with advanced fatty degeneration of the heart or a pronounced dilatation, in whom the effects of cardiac insufficiency extend to the whole circulatory system and symptoms of renal incompetence are manifest.

Early Diagnosis of Tuberculosis.

Combemale and Mouton (*Deutsche Med. Woch.*, Oct. 5, 1899) at the Fifth Congress for Internal Medicine recommended the use of a single and innocuous means: the injection of physiological saline solution, after which patients affected with incipient tuberculosis are claimed to react as after tuberculin injections. They injected twenty grammes under the skin in the trochanteric region, and took their patients' temperature every three hours. From a series of thirty cases they conclude that although not affording a diagnostic test of positive certitude, the injection of saline solution allows of a most probable diagnosis. They further hold that a tuberculin test should only be considered as giving positive proof when the normal saline solution has afforded corroborative evidence.

The Craving for Stimulants.

H. Campbell (*The Lancet*, Oct. 21, 1899) says that the blood normally contains stimulants, that these stimulants exercise a favoring influence on function, and conduce to, and may even be a necessary factor in the production of, the feeling of well-being, which explains the wide-spread liking in man or beast for stimulating substances. This liking, amounting often to a craving, is the expression of a great physiological principle. When there is perfect health, when the blood

is well provided with its proper stimulants and not overcharged with depressants, there is no craving for extraneous stimulants, as alcohol, tea, or coffee. But when it is defective in the one or surcharged with the other, then is felt the desire for the glass of wine or the cup of tea. In order to obviate this desire we should seek to keep the body at the highest level of health. The more perfect the health the more perfect will be the composition of the blood, both in respect to physiological stimulants and deleterious toxins. A blood properly constituted in these and other respects will exercise a gentle stimulant action on the nervous system and induce a condition of mild physiological intoxication which expresses itself in a feeling of well-being and happiness—a condition which cannot be bettered.

"Maladie Bleue."

A peculiar form of "maladie bleue" was observed by Bard (*Soc. Méd. d. Lyon*, June, 1899) in a man thirty-nine years old who had coughed almost continuously since childhood, and who had for the last eight months of his life been cyanotic. The cyanosis before becoming permanent had been intermittent. It was thought that there was a non-closure of the foramen Bottani, but the autopsy revealed this not to be the case. The bronchi were all very much dilated, and there remained only a small amount of lung tissue.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

How to Preserve as Permanent Specimens Casts Found in Urine.

L. N. Boston (*New York Medical Journal*, Nov. 4, 1899) recommends the following mixture as a preservative for all forms of casts: Liquor acidi arseniosi (U. S. P.), one fluidounce; salicylic acid, half a grain; glycerin, two fluidrachms. Warm slightly until solution is effected, when add acacia (whole tears), and again warm until solution is saturated; after subsidence, decant clear supernatant liquid. A drop of formalin (forty-per-cent) may be added to this mixture if desired.

After all ordinary precautions as to cleanliness are taken in securing the urine, says the writer, a bottle, previously cleaned, is partially filled, corked tightly, and allowed to stand in a cool place until a precipitate collects at the bottom of the liquid. Decant the super-

natant urine, add an equal quantity of distilled water to the precipitate, and allow it to stand until it collects again at the bottom of this liquid. (If a few drops of chloroform is added, urine thus obtained can be kept for days without any change in the casts) The precipitate is lifted by means of a pipette, and a small drop of the thickest of this sediment is placed on the center of the slide and carried to the microscope, where it can be viewed under a low power. If casts are present, it is evaporated nearly to dryness, when a drop of the above described medium is added by means of a glass rod to the center of the drop of urine, and it will be noticed that there is no tendency for these substances to mix; the urine completely surrounds the drop of medium, and in order to get an equal distribution of casts throughout the field it is necessary to carry a fine needle from the outer margin of the urine to the center of the medium until the two substances show no tendency to separate, care being taken lest air bubbles are produced. A cover-glass is moistened by the breath and then allowed to fall gently on the specimen. The slightest pressure, or the application of heat, is usually destructive to casts. The slide is now put in a cool place for a few hours, in order that hardening may be complete. A permanent ring of zinc-white has been shown to be of value in the preservation of these specimens.

THERAPEUTICS.

External Applications of Salicylic Acid.

It has been generally conceded that salicylic acid could be taken up through the skin, and several appropriate cases treated by this method in Professor Mosler's clinic in Greifswald (*Wiener Klin. Woch.*, Sept. 7, 1899) afforded most encouraging results. In the treatment of acute articular rheumatism a mixture suggested by Ruel, containing 20 grammes of salicylic acid, 100 grammes of alcohol, and 200 grammes of castor oil, was applied in the form of a moist dressing over all the inflamed joints, sometimes over the whole limb, and eventually over the chest and back of the patient. A layer of cotton-batting, one centimeter in thickness, wrung out of the salicylated mixture, was applied on the required spot and covered with oiled silk, over which a thick layer of ordinary non-absorbent cotton was secured by roller bandages. The main advantage in these external applications of salicylic acid resides in the absence of those untoward symptoms incident upon internal administration. After the lapse of a few days a local desquamation and burning sensation would sometimes follow repeated dressing, in which case the following salve was sub-

stituted: Salicylic acid 10 grammes, oil of turpentine 10 grammes, lanolin 30 grammes, paraffine ointment 50 grammes. The salve was continued for several days after complete retrocession of local manifestations in order to avoid a recurrence of the trouble. Salicylrasogen in the proportion of ten per cent shows a more efficient action, and withal produces less irritation of integument than the salicylated oil. In later stages of the disease medium doses of salophen have proven serviceable. External applications of salicylic acid have also been successful in the treatment of chronic articular and muscular rheumatism and sciatic neuralgia.

Hyperidrosis Pedis: Sweating Feet.

Adler, of Prague (*Therap. Berl. der Deutsche Med. Woch.*, Oct. 5, 1899), reviewing the various methods of treatment advocated, concludes that all applications, even of concentrated muriatic, nitric, or carbolic acid, or dusting with powered tartaric acid, while apparently successful, only suspend abnormal sweat secretion for as long as the superficial eschar (the tanned epithelial layers) remains *in situ*, consecutive regeneration of the secreting epithelium bringing about a rapid recurrence of the trouble.

Among many palliative applications Adler claims first place for the forty-per-cent solution of formalin as supplied by the trade, of which one application is to be made by brushing over the sweating surfaces for a few minutes, or by immersion. No evil results should be feared from the sudden and complete suppression of the sweating. Cases in which interdigital spaces or other parts are inflamed and macerated should be dusted daily with tannoform until healed, and then painted over once with the formalin solution.

Even this treatment affords only passing relief, insomuch as the resistance of the tanned epithelial covering depends upon thoroughness in applying the formalin solution.

In due course of time, extending up to four weeks' duration, a gradual exfoliation occurs, until the regenerated sweating epidermal surface is again exposed.

Treatment of Dysentery.

Among the substances employed in rectal injections against dysentery nitrate of silver takes the first rank, while permanganate of potash is but rarely used. Yet this last agent, according to Dr. Gastinel (*Medical Press and Circular*, Oct. 4, 1899), constitutes a remedy of considerable value. His treatment consists in administering at the outset an enema composed of ten ounces of a solu-

tion of permanganate of potash (1:1000), to which is added an equal quantity of water sufficiently hot to raise the mixture to 112° F. The patient lies on his left side for the first part of the enema, on his back for the second, and on his right side for the remaining third, and retains the injected liquid one or two minutes. If the visit is made in the evening nothing more is to be done. The following morning a second enema is given, followed in a few hours by the ingestion of fifteen grains of calomel. If the patient is seen for the first time in the morning an enema is ordered at once, and when ease has been procured — that is to say, at the end of an hour — the calomel is given.

These enemata are repeated generally every twelve hours, and as the character of the excretions has been modified, only one is given daily, and finally only every two or three days, while at the same time the strength of the solution is diminished. The enemata are somewhat painful, but bearable, the pain not exceeding half an hour, while it is followed by a considerable relief of all the symptoms.

In children M. Gastinel employs the same treatment, but naturally the strength of the solution is much weaker (0.2 per cent), while the dose of calomel is in proportion to the age.

Mercury in Diseases of the Heart.

In the October number of the *Dublin Journal of Medical Science*, W. Beatty has the following to say regarding the cases of heart disease in which he has found mercury of value: (1) Of all conditions in which mercury is useful, one in which it is most certain to do good is general venous engorgement due to chronic primary mitral valve disease. In a typical case there are a rapid, irregular, compressible pulse, physical signs of dilatation of heart, a regurgitant or obstructive murmur, full and pulsating cervical veins, an enlarged and congested liver, high-colored, scant, and albuminous urine from congested kidneys, anasarca, and perhaps some ascites— in short, all the evidences of back pressure. (2) Cases of general venous engorgement dependent upon mitral incompetence (relative incompetence) secondary to aortic regurgitation of old standing. (3) Cases of dilatation of the heart with general dropsy, but yet no obvious valvular disease, there being no murmur and no evidence of kidney disease. (4) Cases of general venous engorgement from failure of the right heart, caused by severe emphysema and bronchitis. (5) Cases of general venous engorgement due to cardiac dilatation following upon long-continued hypertrophy of the left ventricle, due to chronic interstitial nephritis.

A New Ointment Base.

Pelagatti (*Monatsh. f. Prakt. Dermat.*, 1899, vol. xxxviii, No. 2, in *Deutsche Med. Woch.*, Oct. 5, 1899) recommends the use of salve-glue (Salbenleim), which he uses as a preferable substitute for unguentum caseini because it combines the advantages of a salve base and of ordinary gelatin paste, and will take up any medicinal substance in any proportion. The composition calls for zinc-glue (zinc gelatin paste) 30, glycerin 20, water 50, lanolin 48, and oxide of zinc 20 parts. The mixture dries rapidly, does not soil the patient's clothing, and because of the lanolin and water allows of cutaneous absorption of incorporated subs'ances. Another advantage is be found in the strict localization of powerful applications. The required medicine should first be prepared in the form of a lanolin ointment and the zinc-glue added afterwards. In three to four days the application drops away in large shreds.

Potassium Permanganate in the Treatment of the Morphine Habit.

Potassium permanganate is recommended by Dr. Alexander Irvine, of Cooper, W. Va. (*Virginia Medical Semi-Monthly*, August, 1899), for the treatment of the morphine habit. It antidotes in part the violent abstinence symptoms following the withdrawal of morphine. The author claims that one of the chief causes of these symptoms is the presence in the stomach of oxydimorphine, the form in which morphine is excreted by that organ. The permanganate acts as an antidote to this poisonous oxydimorphine.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Relation of Adenoid Vegetations to Certain Infectious Diseases of Childhood.

Dr. Plottier, of Geneva, in an able article with the above title in the current number of the *Revue Hebd. de Laryngol.*, etc. (vol. xx, No. 41), makes a contribution to our statistical knowledge. His observations are derived from a careful examination of the nasopharynx of 268 patients at l'Hôpital des Enfants Maladies during a period of four months. The following table illustrates the cases and the varieties of disease:

Disease.	Cases observed.	Coexistence of adenoid vegetations.
Measles	54	7 per cent.
Diphtheria	53	29 " "
Gastroenteritis	25	1 " "
Hereditary syphilis	5	0 " "
Scarlet fever	5	1 " "
Athrepsia	16	0 " "
Acute meningitis	7	2 " "
Bronchopneumonia	27	6 " "
Whooping-cough	7	3 " "
Tubercular meningitis	12	1 " "
Pulmonary tuberculosis	20	5 " "
Various diseases	37	10 " "
	268	65 " "

It will be seen from this table that rarely are diseases of the intestinal tract and adenoid vegetations concomitant, and on the other hand is to be noted the great frequency of adenoids among the cases of affections involving chiefly the respiratory tract, an occurrence that can scarcely be only coincidence. Adenoids existed in 54.7 per cent of the cases of diphtheria, in 26.4 per cent of the cases of bronchopneumonia, and in 25 per cent of the cases of pulmonary tuberculosis.

The presence of these tumors in the nasopharynx constitutes a *locus minoris resistentiæ*, a true port of entry, and a culture ground for all sorts of infectious germs.

Tuberculosis of the Pharyngeal Tonsils.

Dr. Lewin, of Breslau, in the last number of *Archiv für Laryngologie und Rhinologie* (vol. ix, Heft 3), has a long article on the above subject which does not easily lend itself to a short abstract. The material examined was divided into two classes. In the first class the excised tonsils in 200 cases were submitted to a critical examination, and in nine instances tuberculosis of the tonsil was found. The second group of tonsils submitted to histological examination were obtained post mortem from cases where there had been well marked tuberculosis of various bodily organs before death. Of this second group seven showed well defined "latent" tuberculosis in the tonsils.

The author presents as a result of his researches the following conclusions:

1. According to our experience tuberculous nodules occur in about five per cent of the cases of hyperplastic tonsils.

2. This tubercular process shows in its characteristics the so-called tumor form of mucous membrane tuberculosis; on account of the absence of all outwardly recognized signs it is termed "latent" tuberculosis of the tonsil.

3. This latent tuberculosis may in all probability be the first and exclusive localization in the individual affected.

4. It is generally, however, combined with a tuberculosis in some other bodily organ, notably the lung, the latter being unrecognized at the time of operation.

5. It is relatively of more frequent occurrence in pulmonary tuberculosis.

6. It may occur quite as well in tonsils of normal size as in those where there is decided hyperplasia. It is doubtful if this process of itself produces hyperplasia through the activity of its toxins. It may, however, arrest the physiological involution of the tonsil.

7. It plays a relatively unimportant rôle in the etiology of hyperplasia of the tonsil.

8. This process can be eradicated by removal of the tonsil, even when there is concomitant pulmonary tuberculosis.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Protecting the Perineum.

In order to protect the perineum during labor, Coeg (*Centralbl. f. Gynäk.*, July 15, 1899) recommends: (1) Baths, both general and local, during the last months of pregnancy. (2) Inunctions with oil while the head stretches the perineum. (3) Lateral decubitus during the last expulsive efforts. (4) Increased flexion of the fetal head by means of the index-finger pressing on the vertex during pains. (5) When the occipital wedge opens up the vulva, reposition of the anterior commissure over the neck of the child. (6) Prohibit bearing down while the pains last. (7) Efficient support of the fetal head during pains, and avoidance of too early deflection. (8) Protection of the perineum; the fingers of the left hand retard the head, while the right hand exerting a slight pressure against the perineum draws the posterior commissure toward the anus. (9) Furthering deflection of the fetal head by encouraging voluntary expulsive efforts between pains, while the index and middle fingers of the right hand introduced in the anus tend to deflect the head upward and forward. (10) When the occiput remains in the vulva and deflection does not take place, incision of the vaginal ring with a straight tenotome and between pains. (11) No incision of the vulva before the vaginal ring has been divided. In case of threatening rupture of the perineum, incision of the vulva in a posterolateral direction at the meeting point of the middle and posterior third, the incision to extend through the mucous

membrane. (12) During birth of the shoulders pull the anterior one forward from under the pubic arch (between pains) while depressing the head backward, and deliver the posterior one by reversing the maneuver.

Heart Disease from an Obstetrical Point of View.

A. H. Wright, in the September issue of the *American Medical Quarterly*, in discussing this subject, says that a woman having a heart lesion which is compensated should not be prevented from marrying.

Abortion, says the writer, should not be induced on a woman with heart disease unless very serious symptoms are present, and premature labor should seldom or never be induced on account of heart disease.

Mitral stenosis is the most serious heart lesion during pregnancy and labor; aortic stenosis comes next; then probably aortic incompetency. Mitral insufficiency is the least serious lesion.

As to treatment during pregnancy, the writer administers, according to indications, strychnine, digitalis (or strophanthus), cathartics, nitrite of amyl, nitroglycerin.

During labor the treatment should be kept up, giving digitalis (or strophanthus) during the first stage. As soon as this stage is over deliver with forceps.

The patient should be carefully watched during the third stage and for some days after.

Breech Presentations.

D. G. Doherty (*American Gynecological and Obstetrical Journal*, Nov. 1, 1899), in discussing breech presentations, makes the following suggestions:

When the os is fully dilated and the waters have broken, the attendant should with the hand externally hold the child's head against its breast. This helps uterine contraction and keeps the arms folded on the breast, thus avoiding extension.

As soon as the breech is out of the vagina, begin expression, and aid it by downward pressure with the fingers of the other hand on the child's upper jaw.

The fingers on the upper jaw should help turn the head on its longitudinal and transverse axes.

Don't begin expression unless danger to the mother or child is present, as shown by auscultation, pulse-rate, funic beat, convulsions, or hemorrhage.

If expression fails, use the forceps.

In conclusion the writer says that the chief motto of an obstetrician should be *festina lente*—make haste slowly. Most of the mishaps of obstetrics occur because the physician is led to interfere, his judgment and self-possession being overpowered by the pleadings or scoldings of the parturient woman and her sympathetic friends. Women want babies, but they don't want to pay nature's price.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH., Attending Neurologist to Harper Hospital.

Chronic Spinal Neuritis.

Dr. Arthur Conklin Brush, in the *New York Medical Journal* of October 14, 1899, discusses the course and prognosis of this disease, calling attention to the fact that it is usually described with the acute form, to which it may be secondary; or it may be chronic from the start, following such causes as injury, alcohol, the metallic poisons, tuberculosis, malaria, rheumatism, and gout.

As in the acute form, the inflammation is confined to one nerve or group of nerves. The symptoms develop slowly and insidiously, pain being often an early and prominent one—pain referred to the course of the nerve, dull and burning. Over the affected area sensation is diminished; there is gradual loss of power and flaccid atrophy, and this may pass on into complete paralysis with almost total disappearance of the muscle substance.

Clinically, the cases can be divided into those in which the inflammation is confined to one or more nerves in the arm or leg, and those involving a large number of nerves.

In the cases reported prognosis was proven very bad—three dying, one being left with complete paralysis and atrophy of arms and legs, and two terminating in locomotor ataxia.

Syphilis and the Nervous System.

The *Medical News*, in an editorial in the issue of October 28, calls attention to the steadily lessening number of those who still persist in refusing to accord to syphilis that importance as an etiological factor in nervous diseases, notably such diseases as locomotor ataxia and general paresis, which recent studies of careful investigators seem to pretty well establish.

We are reminded that two recent medical conferences bring out

the fact with renewed emphasis. At the last meeting of the British Medical Association even the most conservative admitted syphilis as nearly always the active cause of general paresis.

Among the Icelanders, Highlanders, and the European peasantry the disease is uncommon, but in the cities it is increasingly more frequent.

Recently Dr. Jonathan Hutchinson, of London, a most conservative thinker and writer, called attention to the fearful and hopeless affections of the spinal cord engendered by the disease, and while deploring extravagant sensationalism in the matter, said that we are bound to make the dreadful effects of the disease more widely known.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The Eyes and Ears of Employees of Transportation Companies.

Dr. Frank Allport (*Philadelphia Medical Journal*, Nov. 11, 1899) read a paper with this title before the Chicago Medical Society November 1, 1899. He stated that color-blindness was defined as an abnormal condition of the visual apparatus, causing inability to accurately, invariably, and properly distinguish the colors of the solar spectrum; the most frequent variety causing difficulty or impossibility to distinguish between red and green. Color ignorance should not be confounded with color amblyopia, as no abnormal condition exists, but lack of chromatic exactness and nomenclature frequently causes suspicious indications in persons unfamiliar with colors. Color amblyopia may be congenital or acquired.

Corporations, unions, etc., frequently profess skepticism with regard to accidents traceable to color amblyopia, thus wilfully disregarding several authenticated historical contrary instances, to say nothing of the ill-defined records of transportation accidents, where under the etiologic headings of "carelessness" and "undetermined causes" is found ample opportunity for the occurrence of calamities justly attributable to color amblyopia, poor vision, and hearing. Those who test for color blindness should be sure of their own color sense. Examinations should be universally made once in three years, once a year in those who use tobacco or liquor excessively, and immediately after accidents, severe illness, and when inattention to signals or other occurrences tend to cast suspicion on the responsibility, vision, hearing, or color perception of an employee.

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ORIGINAL CONTRIBUTIONS.

MORPHINISM.*

BY WALTER F. BOGGESS, A.B., M.D.,

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In presenting this short and imperfect paper on the subject of morphinism, it shall be my object to deal with the practical every-day experiences of an every-day practitioner, and not the theories of the neurologist or the sanitarium dreamer. The paper is based upon my own experiences, which only echo the conditions that are met in the life of every general practitioner.

While I will grant that the great majority of morphine habitués owe their condition to the direct result of physicians recommending in some acute or chronic trouble (real or imaginary) the use of the drug in some of its preparations, I also agree that while the hypodermic syringe is one of the greatest boons to humanity, it is also capable of being a great curse, and that a physician is extremely culpable to teach a patient or member of a patient's family the use of the hypodermic, however much it may lessen the physician's labor and inconvenience in responding to the numerous and ever inopportune calls that certain neurotic subjects make upon his time and patience to relieve them of some imaginary ill gotten up for the special occasion. Yet there are certain and many organic and incurable affections where pain is so troublesome and intense as to justify a physician in making the patient a morphine habitué; for the province of a physician is two-fold — not only to cure disease, assisting and directing the innate powers of the human economy to restoration to normal structure and normal function, but also and of equal importance to relieve pain and

* Read before the Louisville Clinical Society.

suffering, and if the Divine Being who holds and so directs our lives wills it, to make the end of life a pleasant one, free from pain and suffering—a euthanasia.

In what class of cases do physicians use morphine?

1. In all cases where pain is present from some acute organic lesion, from infection, traumatism, or chronic incurable cases.

2. In functional derangements of any kind involving the nervous system.

3. As a hypnotic in insomnia.

In the first class I think there can be no question as to the duty of the physician in using a remedy that lessens shock, that lessens abnormal tissue metamorphosis, that lessens suffering; it is his duty in these cases to give prompt and effective relief. In the first stage of pneumonia, in pleuritis, in biliary and renal colic, in traumatisms, etc., where other means fail to give relief, morphine is indicated.

In the second class of cases I have reference to such diseases as neurasthenia and hysteria with their hydra-headed symptomatology, dysmenorrhea, various forms of neuralgias, recurring headache of nervous origin, and the menopause with its myriad of nervous reflex symptoms. Here the administration of the drug, without sufficient care and safeguard, becomes quite another subject, and puts the physician on quite questionable ground. How often do we find a dose of morphine given in good faith for some slight recurring functional trouble with pain, ovarian congestion, dysmenorrhea, hysterical manifestations, neuralgias, etc., until the patient becomes aware of the fact that it produces comfort and freedom from pain, and he or she begins to rely upon it for every real or imaginary pain or ache until the habit is formed! Our greatest danger lies in that class of cases in neurotics which we are pleased to term neurasthenia, that incompetence of the central nervous system in consequence of which fatigue occurs with undue readiness, the various neuroses of the disease, the multiple and varied pains, the insomnia, the emotional tendency which is productive of so much mischief—all are tempting to the physician to use morphine when all other remedies have signally failed. In the last ten years my experience in treating this class of cases, in those where I have been forced to use morphine, has taught me a sad and most forceful lesson.

In the third class of cases in which a physician is tempted to use morphine, I will say that the giving of the drug for the simple relief of insomnia is most reprehensible. Here is another very fruitful source of our morphine habitués. It is a most dangerous drug to put into the hands of such patients as suffer from simple insomnia.

Not to go further into the etiology of the morphine habit, I will

say the treatment naturally divides itself into prophylaxis and treatment of the habit.

1. *Prophylaxis.*—The physician should ever be careful how he puts opium into the hands of his patients. In the last four or five years I have not written a prescription for the relief of pain. I always carry the drug with me so that I may know just how much my patient is getting, and can stop its administration at any moment I think necessary. Too much carelessness is practiced by physicians in placing morphine in the hands of patients to be used at their pleasure, and especially upon prescriptions that can be refilled without the physician's knowledge. The hypodermic syringe, as I have before said, has wrought untold mischief, and should never be put in the hands of a patient.

In this connection the following case may be of interest; it occurred in my practice four or five years ago: Mr. K——, aged forty-two, was the subject of cardiac asthma, with which he suffered intensely, until relief was obtained by the use of morphine either hypodermically or by the mouth. As time went on the attacks became more frequent. I prescribed a two-ounce bottle of morphine solution, four grains of morphine to two ounces distilled water, dose a teaspoonful, making one-fourth grain to each dose. The directions were plainly written upon the label, a teaspoonful every four hours. Evidently through failure to read the written instructions, his wife gave him a tablespoonful, making a grain of morphine; relief not being obtained in two hours she gave him another tablespoonful; three hours later another tablespoonful was given, and the patient's condition becoming alarming, they hurriedly sent for me. As might reasonably be expected I found the man lying *in articulo mortis.*

That was a lesson to me. Here was a drug prescribed in practically harmless doses, had the directions which were distinctly written upon the bottle been followed; and yet the man lost his life simply on account of my prescribing that quantity of morphine to be left with the patient, which was not a large quantity under the circumstances to be put in the patient's hands.

2. *Treatment of the Habit.*—Of course, for the successful treatment of morphinism there is only one remedy, and that is the withdrawal of the drug. Two methods for this have been suggested and tried, each having its quota of adherents: complete and sudden withdrawal of the drug as furnishing a short struggle, though a severe one; the other, which I think the best method, is by a gradual diminution of the quantity of the drug. Either one of these methods can but rarely be successfully carried out in general practice at the home of the patient, but better in some institution or infirmary controlled by an experi-

enced physician. The patient must be carefully watched and cared for. It is generally better to use some adjuncts in the treatment, such as strychnine, digitalis (when asthenia is pronounced), nitroglycerin, aromatic spirits of ammonia, etc., although many authorities deprecate the use of any adjuvants at all.

The withdrawal oftentimes sets up intercurrent troubles which demand attention, such as diarrhea, vomiting, insomnia, mania, melancholia, etc., etc. Especial attention should be given to diet, frequent liquid nourishment being indicated. Every measure to stimulate the appetite and promote the digestion should be considered and employed. Rest, hydrotherapeutics, and such other restorative methods should be employed when possible. To produce sleep one of the numerous modern hypnotics should be used—trional, sulphonal, chloralamid, hyoscine, chloral, chloralose, bromides, etc.

I remember while at the Insane Asylum at Lakeland, Kentucky, a great many cases of the morphine habit were sent there to be cured. At that time we practiced the sudden and complete withdrawal of the drug, and it has never been my misfortune to witness such intense suffering on the part of human beings as befell these patients when the drug was suddenly and completely withdrawn. The most distressing features observed were great prostration, asthenia, threatened heart failure, etc. It is a very much more humane method, in my estimation, to withdraw the drug gradually without the patient knowing that you are decreasing the dose. And as already shown, it is generally better to use some of the adjuvants.

I have in mind three cases, which will be briefly reported:

Case 1.—Mrs. F—— three years ago had some organic ovarian trouble and became a pronounced neurasthenic; her pain was intense; insomnia was prolonged; for months and months that woman did not sleep one hour out of the twenty-four. For the relief of the insomnia I tried almost everything known; I gave her as much as sixty grains of trional in a single night; I gave her as much as one hundred and twenty grains of chloral in twenty-four hours; I gave her two ounces of paraldehyde in gradually increasing doses. I tried, it seems to me, everything that has been recommended as a hypnotic and sleep producer without effect. As a last resort I gave her morphine, and by gradually increasing the dose she was gotten into a fairly comfortable condition, and I finally had her operated upon. After the cause of her reflex excitement was removed, when we had her in the infirmary, we gradually withdrew the morphine from three and a half grains to one and a quarter grains daily, and after a few days no morphine was given. At that time she developed a most terrific membranous dysentery, and of all the bowel troubles that general

practitioners have to deal with I think there is none so stubborn as this disease. Of course, that forced me to go back and again administer morphine, which I did in small doses running up to half a grain, and for nearly a year she took half a grain of the drug hypodermically each night. Then I withdrew it gradually, occasionally giving strychnine or nitroglycerin, until she developed a peculiar skin trouble which Dr. I. N. Bloom reported to this Society was a neurosis. After a time her condition became so impoverished that I went back again to small doses of morphine, and her general health greatly improved. For the past three months I have discontinued the use of morphine, most of the time giving her simply hypodermics of water. A week ago I concluded that the time had come for me to tell her of the procedure, which was done, and since that time I have had a case of acute mania to deal with; so great was the shock to her nervous system that for the last week she has had acute mania, and is just beginning to get rational. I have not been giving her any morphine for nearly four months, nor do I propose to give her any more.

Case 2.—Miss S——, a very peculiar neurotic case. Dr. William C. Dugan operated upon her for me. She had a hematoma without any assignable cause in the biceps muscle of the left arm, and in the gluteal region of the left leg. These were peculiar conditions, and she refused for a long time to have them operated, but finally consented. Upon making an incision over the hematoma of the leg, the immense clot had become semi-organized; it was like a large mass of Swiss cheese. It was lifted out, and the wound healed readily, but ever since then she has had the most terrific neuralgic conditions. I have tried several times to withdraw the morphine, but each time her nutrition has become so much impaired that complete withdrawal has been impossible. I instructed her father in the use of the hypodermic syringe, and for the last year and a half I have seen the patient but infrequently. Her general condition is very unfavorable, and for this length of time she has been getting about one grain of morphine per day; the quantity has never been increased above that.

In this case I think the giving of morphine was justifiable. I know the girl would have died without it, because the pain was so intense she could not have lived under it. This is the only case I have ever had where I have instructed the parent or any member of the family in the use of the hypodermic syringe.

Case 3.—About three months ago I saw, in consultation with a country doctor in one of the small towns of the State, Mrs. R——, in whom was considered the advisability of producing an artificial premature delivery. The woman had suffered from the most intense nausea and vomiting from the beginning of her pregnancy until nearly the

end of seven months' utero-gestation, and the only thing that would give her any relief was morphine given hypodermically. In addition to that she was rather a hysterical woman, and would develop the most intense hysterical conditions. Being four miles from the doctor, he instructed her husband in the use of the hypodermic syringe.

When I saw her as to the advisability of delivering her prematurely, she was taking from two to four grains of morphine a day. Whenever, for instance, she was talking to a friend, and concluded she wanted some morphine, she would have an intense paroxysm and would send for her husband, who would give her a hypodermic. I found the woman's heart in good condition, and thought she would go to full term without any trouble. I suggested to the doctor that the morphine be continued, but as the woman's father could better control its administration than her husband, that it be entrusted to him; and that the dose be gradually lessened, so that she would be practically cured at full term. I received a letter from the woman's physician last week saying she had been delivered of a fine healthy baby, and that she had entirely quit the use of morphine by gradually decreasing the dose.

These are all typical cases that come within the province of the general practitioner, and while we may feel culpable in giving them morphine, taking the chances of making morphine habitués out of them, yet we have the satisfaction of knowing that we have lessened suffering by its administration.

LEPROSY IS SURELY CONTAGIOUS.

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

In reply to Dr. J. Ashburton Thompson, chief medical officer of the Government, and president of the Board of Health, Sydney, New South Wales, Australia, who in his article (*Lancet*, Sept. 30, 1899) opposes the views of Dr. Jules Goldschmidt, for twenty-six years in charge of the Funchal Leper Asylum, about the conditions of leprosy in Madeira, I print the following opinions. Here is what Dr. Roberto Aguero, the physician in charge of the Lazaretto Caño de Loro, Bolivar, near Carthagena, and Commissioner on Leprosy, of the Minister of State, United States of Colombia, has to say on the subject of contagion of leprosy. Bear in mind that there are 30,000 lepers in Dr. Aguero's country, and that there have been *since 1883 only sixty-three lepers in Dr. Thompson's country* (New South Wales):

"If leprosy is a disease of infectious nature, there is no doubt that it is contagious, and this is the opinion which I profess, as an

expression of conviction derived from observation, from study, and from the careful investigation of the personal leprous antecedents. My opinion is that leprosy is contagious, but not in the same degree as diseases of such active virulence as the eruptive fevers, typhoid fever, cholera, tuberculosis; and I believe that for the contagion to take place there is necessary a contact which facilitates the entrance into the healthy organism of Hansen's bacillus, or its toxins—be it through the mucous passage, or through erosions of the skin, which offer an easy access to the infection. In the first instance it takes place directly from the sick to the well, by the intimacy of life, by prolonged contacts, by the community of domestic utensils, without proper precautions of asepsis, or by the constant intercourse between sick and well.

"When a healthy individual for a long period holds intercourse with a diseased one, an occasion for infection readily presents itself either because the healthy person makes use of the bowl, of the spoon, or any other utensil used by the diseased person, or because he puts his lacerated skin into contact with that of the diseased one, or some of his secretions, offering thus the occasion for the infectious principle to effect an entrance. Hence the case, a very frequent one, of individuals who have lived many years with lepers, and have remained immune, while there exists also the opposite — one single contact, for a short moment, has been sufficient for the infection to take place, and the contagion to become manifest. I want to say this, that the moment is a single one, and that when it presents itself a natural law is necessarily accomplished, just as a grain sprouts when it is placed under conditions required by the biological laws of its evolution.

"In the second instance it is sexual intimacy that propagates and perpetuates the terrible scourge. It is a thing worthy of attention that many women feel no horror for leprosy, and give themselves more readily to a leper than to a healthy person; and strange to say, I have never seen that the woman who gave herself to a leper was infected, while I have observed many cases of perfectly healthy individuals without leprous antecedents, and without visible cause for becoming lepers, who have been infected through having sexual relations with a woman who had had intercourse with a leper. Does the vagina convert itself into an inert receptacle, whence without causing harm to the woman there issues an irrepealable sentence on the unfortunate who has penetrated into that cavern of death? Possibly it is so, and it is generally believed, and an almost evident fact, that the woman who has given herself to a leper is a street-walker who lavishes leprosy over those who incautiously fall into her clutches.

"One of the most necessary means for stopping the propagation of the scourge, apart from the sequestration of the diseased and the foundation of small departmental lazarettoes like that well established and well directed one which exists in the Department of Bolivar, would be the regulation of prostitution, or its permanent persecution if the State does not permit the regulating and legitimatizing of the exercise of this infamous profession.

"In Santander the people are generally convinced of the contagious character of the disease, and we cannot attribute to any other cause but contagion the lamentable proportions which leprosy has reached in that beautiful country. There, under the epidemic form, it has struck whole villages, which to-day are veritable leproseries, such as Toledo and the Valley of Labateca in the Province of Pamplona.

"The very possible circumstance that sexual intimacy is the most evident and most effective kind of contagion is one reason more for imposing unflinchingly isolation of the lepers, with absolute separation of the sexes, and to supervise *actively and severely* prostitution; and I believe that the only means for solving the problem is to found small lazarettoes, whither will flow the diseased of limited districts. The only practical and realizable thing in this matter would be for every department to attend to its own contingent, with a subsidy from the national government."

Here is another Colombian doctor who probably knows far more about the spread of leprosy than Dr. J. Ashburton Thompson, of New South Wales, Australia. Dr. Alfredo Garces, in "Leprosy in Popayan," says: "The doctrine of contagion is admitted now by a majority of the micrographers and dermatologists. Facts are brought from everywhere, and the question seems decided and out of court. The bacteriological studies have shown that the leper discharges from his cutaneous and mucous surfaces an infinity of bacilli and germs, just as from an ant-hill ants creep out everywhere. Bacilli of Hansen are also found in the saliva, in the urine, in the sperm, in the vaginal mucus, in the nasal mucus, in the tears, in the pus, and sometimes even in the milk (Cornil and Babès). The microphyte, as we have said, has a very long existence, and a power of resistance which protects it against the ordinary climatic influence. Spread in such profusion, it must, no doubt, surround us everywhere, and if it has not as yet been discovered in the atmosphere it is because it has not been sought there, and because it is not known well enough. In a land of leprosy we carry all about us the germs of the disease, and all we have to do is to beware of making ourselves an appropriate soil for it. The contagion can be made by the intermediary of the tainted objects

carried by the leper; but, without aptitude for contracting the disease, there is no contagion. The leper will infect us, if we are prepared for that, as the air would do, or any other object conducting the microbe; but without lesions of the peripheral nervous system and of circulation, or, to speak more clearly, without an entrance door, the disease is impossible. Leprosy, therefore, is a disease which can be caught by contagion or by contact with lepers, *or without it;* it is enough to be apt to receive the microbe, which may be caught wherever it is found, and even be carried on the body for a long time: an instance is the case quoted by Barber, of a person operated on for a small sarcoma of the face, in which the microbe was discovered, who, in consequence of this operation, became a leper. The contagion is not common and general as in smallpox, scarlatina, measles, etc., because these diseases need no initial local lesions; the whole organism is their theater, and they find it prepared; for this reason the individuals who escape them are rare. In leprosy the local lesion is indispensable, and as it is only rarely produced in the required condition, contagion is rare, is the exception; and exceptional though it is, it inspires more horror than that of any other disease."

SOME DIFFICULTIES IN PRESCRIBING AND MODIFYING MILK FOR INFANT FEEDING.*

BY T. M. ROTCH, M.D., BOSTON, MASS.

Human breast milk is undoubtedly the best food for the new-born babe. As the knowledge of its peculiarities has increased a great variety of substitutes have been formed to take its place. Next to human milk, however, cow's milk has been found to be the best for infant feeding. Whole cow's milk does harm to the majority of infants; hence the modification of this milk is valuable and necessary, because infants have different degrees of digestive powers, and a great variety of strengths of the various constituents are needed.

The statement of many physicians that milk cannot be given in a number of the diseases of children I find to be incorrect. The reason for such statements is that these physicians have not had the opportunity of using modified milk adapted to the case and properly prepared. I have had the privilege of treating some thousands of infants with precise modifications from the laboratory, and find that milk is not contraindicated even in cases of summer diarrhea. Of course, this does not mean that the milk is given immediately to such a case, but at the time when food of some kind is indicated. The intestine must

* Abstract of a lecture before the Pediatric Society of Philadelphia.

be prepared first for food, and to this end nothing at all should be given for a time perhaps, except sterile water or brandy, or something of that sort. But when food is indicated modified milk is the most suitable. The trouble with so much of the modified milk is that it is improperly prepared, the sugar or fat or proteids being wrong.

The modifying of milk during the first months of the infant's life is of the utmost importance. Improper and inexact methods do great harm and result in keeping infants from proper growth and development. It is owing to these facts that such a large number of trials are reported as not being successes. In Boston we have had exceptional advantages for testing the method. During several summers a citizen has furnished the money necessary for supplying the poor children with milk from laboratories where it is analyzed and tested chemically by experts, and the modifications built up exactly as is a prescription of drugs. The prescribing of the milk has also been in the hands of men who thoroughly understood the method of using the various ingredients. In some cases of healthy children macroscopic instead of microscopic modification may perhaps do, but in cases of malnutrition and disease there must be the most gradual and minute changes made from time to time.

The first efforts were merely the diluting of milk with water. This took away nutrition and was not a success. Then cream was added to the mixture, but the percentage of fat in the cream was not known. With no stable milk or cream percentages, this made different foods day by day for the child. It was recognized that every infant must have a milk that is adapted to its powers of absorption, and a means for making this was sought.

It is better to start with a low percentage of proteids and increase them gradually than to use predigested milk at first. It is very rarely indeed that predigestion is necessary, and I prefer the other plan. As to the various artificial foods, they entirely fail to settle any of the problems in infant feeding which they attempt to elucidate. One firm advertised that their food or powder to be added to milk supplied the mineral elements lacking in cow's milk. When analyzed the powder did not contain the minerals in question, but only milk-sugar. Its use would therefore make that ingredient much too high in the milk to which it was added. Another one sold at a dollar per pound gave the same analysis as baked wheat flour, except that the percentages of the ingredients were higher in the case of the flour. Yet physicians prescribe these foods and thus support their manufacture. They are handy, and the physician takes the analysis given by the manufacturer and does not concern himself further about them.

Physicians should insist on the best food that can be obtained for

children. There is an idea among the laity that cheap feeding will do for infants. Physicians are partly to blame for this. My experience is that the richer classes are worse in this respect than are people in moderate circumstances. They live on the highest priced foods themselves, but object to paying a good price for properly prepared milk for their children.

The modification of milk for infant feeding should be done under a physician's prescription, just as a druggist prepares his medicines. There are numerous obstacles in the way of having this done in the homes of the parents. In the first place the milk obtained may be diluted with water. Then the cream of different milks may have different percentages of fat. By the table I have prepared it is shown that cream from different cows may be used to make two-per-cent fat mixtures, and yet the proteids run from 1.45 per cent to 2.66 per cent in these mixtures because of the different values of the creams. It is thus readily seen how home modification may yield such entirely different results. Then, again, the mother may add a teaspoonful of cream or a tablespoonful of milk to the mixture ordered, in order "that her baby shall not be starved." This changes the entire formula, with entirely different results following. It is possible by substituting a heavy for a light cream to change the fat in a twenty-ounce mixture from four per cent to ten per cent. This cannot be told except by analysis, and this is why so many physicians' modifications fail. With slight errors making such great changes it is readily seen that it is practically impossible for the mother to do the modifying aright. This should be done in laboratories by experts who analyze the milk, who test it chemically, and thus find the fat value of cream, the relative amount of proteids, the presence of bacteria, etc.

In regard to the bacteria contract milk is generally better and safer to use. The cows, their stables, food, attendants, etc., can be inspected. The milk from a single cow supply is a great danger to successful modification. Nearly all the epidemics resulting from an impure milk supply can be traced to these small sources of supply. I do not believe that heating in any form, such as Pasteurizing, sterilizing, etc., destroys the toxins which have already developed in milk which contains bacteria.

Great work is being done in various cities toward obtaining a pure milk supply. The physician must educate the people to see the necessity of obtaining a proper food for their children, even at the increased price necessitated by the existence of laboratories and experts for determining the values of milk in all its elements.

CORRESPONDENCE.

SOME CRITICISMS ON THE METHODS OF THE BOARD OF REGISTRATION IN MEDICINE.

To the Editor of THE MEDICAL AGE:

The duty and power of the Board of Registration in Medicine is defined in the statute creating said Board. It has no authority to demand more than the statute requires. In its zeal to "sift the chaff from the wheat" it has arrogantly construed certain phrases to mean more than the context will warrant. In their official capacity the members of this Board presumptively emphasize "sufficient proof" and "legally registered" (as found in Div. 1, Sec. 3, Medical Act), and construe these phrases to give them license to impose burdens upon every registered physician in the State, by exacting evidence corroborative of the facts set forth in the affidavit filed in compliance with the old law as shown by the certified copy of registration. They assume every physician shall prove to their satisfaction that he has not perjured himself and fraudulently registered. It is placing an interdiction on every physician in the State. It is evident that the statutory meaning of "legally registered" is nothing more than compliance with the old law in registering; and that "sufficient proof" of such registration would be a certified copy of registration now on file with the county clerk. All other proof is unnecessary and unwarranted under the law. But should the certificate of registration show that the applicant has not complied with the old law, then the registration could lawfully be withheld, for it would not be legal registration. Every physician qualified under the old law has a vested right that no power can lawfully divest him of without due process of law.

The Board of Registration in Medicine has not the prerogative of a court. Its duties and powers are clearly and distinctly defined in each subdivision of Section 3. The Board seems to make no distinction as provided for in these subdivisions, but classes all those falling in Division 1 with those in Division 6 — a procedure contrary to the spirit and letter of the law. The Board is not only acting on the principle that it believes but has openly asserted that "there are hundreds registered in this State who swear that they have graduated from this, that, and the other college, but who really are frauds and perjurers and who are not able to produce the diploma of the college they say they are graduates of." Who vested the Board with authority to judge in the matter of those applying under Division 1 where the possession of a diploma was not absolutely necessary to become

legally registered? Moreover, what right has it to compel any to submit evidence that convicts themselves? The law is a good one and should be rigidly enforced, but that is no excuse for laying burdens upon the innocent, nor placing a ban upon every physician and forcing him to prove his innocence. Physicians have good cause to protest against this high-handed action. It is enough to quietly submit to the legalized swindle whereby something over six thousand dollars is taken from the pockets of. the qualified doctors of this State to enforce a law to protect the people from loss of property and life through unqualified medical attendants. Swindle, did I say? Yes, under any other circumstance that is what it would be called, and in this case it comes little if any short of the same name. But we submissively pay our money for the public good, while we protest against being forced to pay more to gratify the Board in the pleasure of seeing our diploma. However, it hangs in our office, where it has been open to public view for nearly thirty years.

E. S. RICHARDSON.

Reed City, Mich.

WE learn from the *Journal of the American Medical Association* that the medical department of the British army in South Africa is to be supplied with ten sets of Roentgen ray apparatus, to be used both in hospitals and on the field. Each set is thoroughly complete and up to date, and contains six focus tubes, a ten-inch field service induction coil, with condenser and commutator; two pairs of conducting cords, and four ebonite pillars packed in teak cases; two lithanode portable batteries, with six cells of 30-ampere power; one fluorescent screen with cryptoscope, a voltmeter, a stand for *x*-ray tubes, spare wires, a portable cross-frame localizer with stand and accessories, a stretcher with tube-holder and plate-holder; nine dozen Edwards's cathodal XXX plates of various sizes, with material and apparatus for developing; printing paper and printing frames, and black and ruby fabric.

ACCORDING to the *British Medical Journal*, Professor Robert Koch brought home from East Africa poisoned arrows used in warfare by the Wakamba, a tribe whose domicile is near the Kilimandsharo. Professor Brieger undertook the examination of the poison, and succeeded in isolating its active principle, a crystalline body, of which the small quantity of 0.00005 gramme sufficed to kill a guinea-pig 300 grammes in weight in twenty minutes. Brieger's investigations showed the Wakamba poison to be a cardiac one, which in warm-blooded animals produced convulsions, dyspnea, and other serious symptoms in about ten to fifteen minutes, and death shortly after.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE PATHOLOGY OF UREMIA.

In days when laboratory methods are revealing the ultimate nature of pathological processes, it is unsatisfactory to think that our knowledge of the etiology and pathology of uremia is as yet based purely upon theoretical views rather than experimental data. That this condition is due to the retention of excretory products is a theory which has something more than inference to support it, but the positive nature of these substances and which of them is the most toxic remain undetermined. Urea and uric acid were first supposed to be the cause, since these were found in increased quantities in the blood. Frerichs alleged that ammonium carbonate which accumulated in the blood as a result of the decomposition of urea by a ferment was likely to be the cause of uremic symptoms.

This vexed question, "What are the effete matters retained in uremia?" has recently had some light thrown upon it by the experiments of the Italian observer Monari, who finds that when excretion is defective there is not only an alteration in the density and corpuscles of the blood, but that the bactericidal power is diminished and an invasion of various microbes occurs. In twenty-four out of thirty cases he was able to find bacillus coli, staphylococci, and other organisms. Thus he regards uremia as a microbic septicemia due to the toxins produced by various infections when the blood has lost its bactericidal power by being surcharged with excretory products. The importance cannot be gainsaid of substantiating beyond dispute this point, that the toxins and not the urea and creatin are the active poisons in uremia, for several practical points in the treatment of nephritis must follow. The retention theory so far fails from lack of supporting evidence. Herter has shown that the retention of the potassium salts cannot be the cause of the toxicity of the serum in the

uremic state as the serum contains very little of them, nor is it due to the urea extractives, for the toxicity of these is lost at a temperature which has no effect on their decomposition.

Monari's idea of the uremic toxins is that there is altered metabolism and a formation of decomposition products in excess in the muscles due ultimately to bacterial invasion. Two practical points in the treatment of nephritic patients follow. One is the great danger of massage in gout and other uremic states, as thereby the poisonous products in the muscles are driven into the circulation; and the other is the value of bleeding in uremic asthma. In addition may be recommended saline injections in moderate amount at first, and increased as the kidneys are able to react.

There are without doubt many factors in the causation of Bright's disease which require elucidation, and Monari's views must be welcome as a contribution to this result even though they fail finally to be received as true.

EDITORIAL NOTES.

The Physician's Automobile.

A physician living in a picturesque part of England has recorded his experiences with the autocar. Its advantages for the physician he considers obvious. It saves time and fatigue; it can be got ready in about the time a collar can be put on a horse; it does not tire, and it will come out afternoon as well as morning; it is not eating except when at work. At the same time an extract from this physician's diary shows that the automobile is not all that it should be; for instance:

July 11. Changed battery.
July 12. Wheels off; ball broken; new asbestos joint.
July 23. Chain came off.
July 24. Chain adjusted by engineer.
July 25. Front wheel to works; split cone.
August 4. Brake catch broken.
August 11. Changed battery.
August 12. Chains came off.
August 14. Ditto; new chains (English).
August 22. Countershaft off; squeaking.
August 29. Changed battery.
September 15. Water-tube repaired; leaking.
September 16. Changed battery.
September 20. Ditto.
September 20. Chains adjusted.

September 21. Car to works, ten miles off; sundry repairs.

September 22. Ditto; new belt. Had been in a bit of a puzzle here. Car would not take high-speed belt. Found at last that carrier did not carry slow-speed belt off working pulley, consequently on putting on fast speed I was industriously trying to run the car at two speeds at the same time—with unsatisfactory results.

October 3. China insulator worked loose; just managed to get car home. New insulator.

October 8. Changed battery.

October 10. Exhaust spring eased.

October 17. Changed battery; cells out of order.

Something better than this will have to take place before the automobile will displace the doctor's horse.

On the Treatment of Wounds.

A writer in an English journal describes a method of treating surface wounds by means of a light wire cage or support which, while permitting the dressings to afford protection, prevents them from acting as foreign bodies. The merits he claims for his method are principally that the wound is very quickly, easily, and painlessly dressed the patient no longer having to endure the agony accompanying the change of adherent dressings. Wounds, he maintains, treated by this method heal with a quickness as delightful to the surgeon as to the patient. The method is almost ideally aseptic, and the sufferer no longer feels a gradually increasing sensation of heat, pain, and discomfort as the discharges accumulate beneath the sopping dressings, nor does he behold the nauseating mass usually found when the dressings are removed. The writer believes that if the cage method of treatment be tried with wounds surgeons will come to the conclusion that surgical dressings applied to wounded surfaces are anachronisms, relics of barbarous times when pernicious dirt—that is, matter in the wrong place—was applied to such surfaces.

A Quixotic Decision.

A somewhat absurd decision has recently been given by a Missouri judge, who declares that any physician who believes his patient's case a hopeless one, and does not so inform him is guilty of a breach of trust. Apart from the consideration that the profession will never, of necessity, esteem it their duty to render a final verdict to a sufferer, it might be asked, When can such a decision as that of this Missouri judge be put in force? If a patient recovers, he has certainly no case against a physician for not telling him he was hopelessly sick, and if he dies who can have the right of action?

ITEMS AND NOTES.

THE yellow fever in the South is rapidly dying out.

DR. J. E. GRAHAM, of Toronto University, is dead.

TYPHOID FEVER is unusually prevalent in Baltimore.

DIPHTHERIA has been very prevalent in Montreal this fall.

A MAN in Indiana has sued a physician for $10,000 for failing to respond to a call.

THE Newfoundland fishermen now have three hospital ships sent them by England.

AN incubator ward for infants is to be established in the Chicago Lying-in Hospital.

THE new physiological institute erected for the University of Vienna was opened on October 16.

THE plague has reached Lorenzo Marquez on Delagoa Bay, near which it has prevailed for some time past.

THE total valuation of the estate of the late Dr. Pepper, of Philadelphia, has been appraised at $670,886.63.

THE number of children in the New York Institution for the Blind at the end of the fiscal year just closed was 169.

DR. S. WEIR MITCHELL lately delivered two lectures in the Philadelphia High School to girls on "Conduct of Life."

THE tea concert given by Mrs. James Brown Potter for the benefit of the American hospital ship *Maine* netted $37,000.

A BABY, supposed to be dead, and put on ice in the New York morgue, was discovered by its kicking and crying.

A MONTHLY publication of the scientific work done in the Rush Medical College of Chicago is about to be established.

IT is reported that the *Maryland Medical Journal* will shortly be converted into a monthly instead of a weekly periodical.

THE secretaries of the various medical congresses to be held in Paris in 1900 are sending out voluminous announcements

It is proposed to consolidate the medical societies of Baltimore as sections of the Medical and Chirurgical Faculty of Maryland.

A short time ago the Royal Academy of Medicine of Ireland elected Drs. Osler and Kelly of Baltimore as honorary members.

At Zehlendorf, Germany, there has been opened a public sanatorium for nervous diseases for the exclusive use of curable patients.

Major George E. Bushnell, of Surgeon-General Sternberg's staff, has designed a new army medical chest for use in the Philippines.

Several cases of smallpox have been brought into Chicago from Storm Lake, Iowa, where the disease exists among the laborers on the railway.

Dr. Kuettner, of Tübingen, has been appointed chief of the German Red Cross expedition soon to start for the seat of war in South Africa.

Professor Koerner will have charge of the new clinic for diseases of the ear, nose, and throat, that has been established at the University of Rostock.

Constantinople has recently established a bacteriological laboratory. It is under the personal patronage of the Sultan and in charge of Professor Chantemesse.

Fifty members of the Forty-second Volunteer Infantry at San Francisco were recently the victims of ptomaine poisoning caused by hash made with tainted meat.

The first holders of the Research Fellowships in Pathology of the McGill University are W. W. Ford, of Johns Hopkins, and John McCrea, of the Toronto University.

Seventy female nurses are now in the Philippines, and thirty more on the way. There are at present 1289 privates of the Hospital Corps, and 200 more are under orders.

A short time ago a longshoreman entered the Long Island College Hospital, New York, with a small sore on his neck which was found to be anthrax. He died in a few days.

Dr. Ehlers, of Denmark, has been called by Prince George of Greece to Crete to discuss measures for arresting the spread of leprosy, of which a great deal exists on that island.

CAMBRIDGE UNIVERSITY MEDICAL SCHOOL is the most popular one in Great Britain, having a larger number of new students at the beginning of the medical year 1899–1900 than any other.

DANA WOODBRIDGE, M.D., professor of anatomy and physiology in Williams College, died November 5. He was a graduate of the College of Physicians and Surgeons, New York City.

THERE is being conducted at Newport News a series of investigations by Dr. W. R. Thayer, of Baltimore, for the purpose of elucidating the mosquito theory of the propagation of malaria.

PRESIDENT SETH LOW, of the Columbia University, in his annual report to the trustees, stated that the interest charges on the debt of the College of Physicians and Surgeons is now approximately $3500.

GREAT efforts are being made in Sweden to prevent the spread of tuberculosis in that country, and prizes have been offered for the best and second best essays on "Tuberculosis: Its Prevention and Cure."

MR. P. B. C. AYERS, C.M.G., whose death is announced in the English medical papers as having recently taken place, was for upwards of a quarter of a century inspector of hospitals at Hong Kong.

THERE occurred in Lisbon on November 15 the death of Dr. Camara Pestana, a well known bacteriologist who has spent a great deal of time in the study of the plague, of which he himself was a victim.

LORD STRATHCONA AND MOUNT ROYAL has contributed $10,000 toward the fund for the erection of a building for the Montreal Maternity Hospital. The new governing board will have representatives from McGill University and the Royal Victoria and General hospitals.

THE University of Chicago has a new and unique branch in the Chicago Physiological School for the training of nervous and backward children. It is said to be the first of its kind in the world, and is intended as a home for boys and girls who are unable to cope with normal children owing to illness or infirmity.

IT is said that the adherents of cremation are rapidly increasing in Germany. Recent statistics place the number of cremation societies in the German Empire at thirty-seven, with an aggregate membership of thirty-seven thousand six hundred, an increase of membership of more than twenty-five thousand since the beginning of last year.

A SHORT time ago an interesting communication was read to the Académie des Sciences de Paris by a Professor Mascart. The subject of his essay was Volta's visit to Paris, and the recognition he received. Volta received the prize of $15,000 which was offered by Napoleon I. to any discoverer who made the greatest advancement in electricity during that year.

SAYS an exchange: "There is at least one daily religious newspaper in the world. It is the *Montreal Witness*, of Canada. It has 200,000 readers and is edited by the son of a sturdy Scotchman, John R. Dougall. It sacrifices about $50,000 a year because it refuses to advertise quack medicines and theater and sporting gossip. To its wholesome influence is ascribed the fact that none of the Canadian dailies issue Sunday editions."

ACCORDING to a press despatch, the bubonic plague in Paraguay baffles the attempts of the medical men to stop its spread. Dr. Castillo, of the hygienic department, and Drs. Voges and Delfino, have diagnosed the disease at Asuncion as the plague. In Paraguay, out of fifty-four cases reported, thirty-two deaths have occurred. "Curiously enough a systematized campaign is being carried on in Paraguay to suppress the facts in connection with the epidemic."

ACCORDING to the *Philadelphia Medical Journal*, Drs. Toulouse and Vaschide, after a long series of experiments, are reported to have discovered that the sense of smell is more highly developed in the left side of the nose than in the right; this difference appears to be due to the preponderance of mental action of the left side of the brain. The olfactory nerves do not decussate. Touch, vision, audition, etc., are better developed on the right side of the body, but owing to the decussation of the nerves, are presided over by the left side of the brain.

THE following item is going the rounds of the medical press: Not long ago a surgeon in San Francisco was paid $30,000 for performing a successful operation for appendicitis. Dr. Howard A. Kelly, of Baltimore, is said to have been paid $21,000 for an operation and twenty-one day's attention upon a mine-owner's wife. Dr. Tiffany, of Baltimore, received $10,000 for a single operation; Dr. Chambers, of the same city, $5000 for operating for a stab wound; Dr. Parks, of Chicago, received $10,500 for an operation; and Dr. Bernays, of St. Louis, $5000 for a single operation.

NEW PUBLICATIONS.

ON THE PREVENTION OF EYE ACCIDENTS OCCURRING IN TRADES.

This booklet, which contains an address delivered at the opening of the Section of Ophthalmology at the annual meeting of the Bri ish Medical Association at Portsmouth, August, 1899, should receive the close attention of not only the medical man, but of all who are connected with stone, brass, iron, and steel works. A real blessing would be bestowed upon all workers exposed to eye accidents who would follow the advice laid down by the author, and would surely prove what he maintains: that many of the eye accidents associated with trades are preventable by the adoption of some of the most simple and comparatively inexpensive precautions. Hence the employer by compelling the use of such, and the workman by following out the plain instructions here conveyed, would find it more than a mutual benefit. The price (one shilling, English) should bring the book immediately into the hands of those who need it most—the exposed persons. It is printed in clear, distinct type, on superior paper, and is richly illustrated with original and interesting plates.

On the Prevention of Eye Accidents Occurring in Trades. By Simeon Snell, F.R.C.S. Edin. London: John Bale, Sons, and Danielsson, Ltd.

A TEXT-BOOK OF MATERIA MEDICA.

The third edition of Dr. Butler's work on Materia Medica in the space of three years will satisfy the author that he has created a work the usefulness of which has been assured. The arrangement of the work, embodying as it does the synthetic classification of drugs based upon therapeutical affinities, is undoubtedly the most philosophic and rational and the one best calculated to promote an intell gent and comprehensive understanding of materia medica and therapeutics. The author, being a man of wide general culture, has given us a work which is written in an attractive and fascinating style. Important changes have been made in the present edition, a fuller treatment of certain subjects having been adopted, and there can be no doubt that the work will meet with the favorable reception accorded to previous editions.

A Text-book of Materia Medica, Therapeutics, and Pharmacology. By George Frank Butler, Ph.G., M.D., etc. Third Edition, Thoroughly Revised. Miseris Succurrere Disco. Philadelphia: W. B. Saunders, 1899.

A TEXT-BOOK OF EMBRYOLOGY.

The inadequate character of previous manuals of embryology impressed upon the author the fact that students were seriously handicapped in their study of this subject. He therefore went to work with a view of compiling a text-book that should be full enough to be intelligible, and yet without that minuteness of detail which characterizes the larger treatises. The subject has been presented in an orderly and clear manner; illustrations have been selected with great care and employed with regard to their teaching value. They appear as much as possible in chronological sequence. The student of medicine will find in this text-book something which he has been wanting for a considerable length of time.

Text-book of Embryology for Students of Medicine. By John Clement Heisler, M.D. 190 Illustrations, 26 of them in Colors. Price, $2.50 net. Philadelphia: W. B. Saunders, 1899.

THE MEDICAL NEWS VISITING LIST.

The visiting list is an indispensable convenience to the active practitioner, and this one will be found to contain blank pages for the classification and recording of memoranda and engagements occurring in the practice of the physician, surgeon, or obstetrician. The book is printed on fine paper and handsomely bound in the size of a wallet for the pocket.

The Medical News Visiting List for 1900. Weekly (Dated, for 30 Patients); Monthly (Undated, for 120 Patients per Month); Perpetual (Undated, for 30 Patients Weekly per Year); and Perpetual (Undated, for 60 Patients Weekly per Year). The First Three Styles Contain 32 Pages of Data and 160 Pages of Blanks. The 60-Patient Perpetual Consists of 256 Pages of Blanks. Each Style in One Wallet-shaped Book, with Pocket, Pencil, and Rubber. Seal Grain Leather, $1.25; Thumb-letter Index, 25 cents extra. Philadelphia and New York: Lea Brothers & Co.

AN ATLAS OF PATHOGENIC BACTERIA.

The plates illustrating the appearance of pathogenic bacteria recently published in the International Medical Annual were of such a high degree of excellence as to evoke the admiration of those familiar with bacteriology. They have therefore been gathered together and bound in a convenient form as a complete work. They are accompanied by a descriptive text which is succinct and practical in character. For a small work at a reasonable price this atlas will be entitled to a very favorable reception.

An Atlas of the Bacteria Pathogenic in Man, with Descriptions of Their Morphology and Modes of Microscopic Examination. By Samuel G. Shattock, F.R.C.S., etc. With an Introductory Chapter on Bacteriology: Its Practical Value to the General Practitioner, by W. Wayne Babcock, M.D., etc. Sixteen Full-page Colored Plates. Price, $1.00 New York: E. B. Treat & Co., 1899.

A LABORATORY MANUAL.

While this little book is primarily intended for those at work in the laboratory, physiological experiments and tests now form such an important part of practical medicine that the usefulness of this manual will not be confined to students. The work will tell the practical physician how with a small stock of apparatus and reagents he can make those clinical tests which are necessary in his practice. The systematic examination of all the physiological excretions are fully provided for, and the manual contains a clear and concise statement of the method of fulfilling these tests.

A Laboratory Manual of Physiological Chemistry. By Elbert W. Rockwood, B.S., M.D., etc. With One Colored Plate and Three Plates of Microscopic Preparations. Philadelphia, New York, Chicago: The F. A. Davis Company, 1899.

PHYSICIAN'S VISITING LIST.

The approach of the new year is heralded by the number of visiting lists which are now making their appearance. Among these will be found Blakiston's Visiting List, now in the forty-ninth year of its publication. It is unnecessary to say anything in favor of a visiting list which has for so long and so solidly held its place in professional favor.

The Physician's Visiting List (Lindsay & Blakiston's) for 1900. Forty-ninth Year of its Publication. Philadelphia: P. Blakiston's Son & Co. (Successors to Lindsay & Blakiston).

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

A Case of Strangulated Inguinal Hernia in an Infant Aged Three Months; Radical Cure; Recovery.

H. Cameron Kidd (*The Lancet*, Oct. 14, 1899) says that on July 13 last an infant aged two months was brought to him with a history that the child had screamed and cried as if in pain almost constantly since its birth, that its hands were always tightly clenched so as to be with difficulty opened, and that a lump had formed in the groin. On examination a reducible right inguinal hernia was found of about the size of a walnut, and the other symptoms—pain and contraction of the hands—as described by the mother. Further examination made it sufficiently clear that the cause of all the trouble was an excessively tight phimosis, so tight that when the child attempted to micturate the non-adherent parts of the prepuce were first distended to the utmost limit, and then the urine spurted in a fine stream from the pinhole preputial orifice; the child used to pass urine only twice or three times in twenty-four hours. Immediate circumcision was advised and performed, with the result that the rigidity of the hands and other signs of pain at once disappeared; the child began to urinate freely and frequently as an infant should, and within a fortnight the general improvement was so marked as to transform the whole appearance of the patient. A wool truss was applied, which acted excellently, and this was ordered to be kept constantly in place.

On August 12, the child being three months old, Dr. Kidd was hurriedly sent for at 8 P.M., and told that in a sudden fit of crying at 4 P.M. the truss had slipped and the rupture had at once become much larger. The child was screaming with pain, and on examination he found the scrotum occupied by a tense, hard swelling, quite irreducible, and with no impulse to be felt. Vomiting had been constant since the afternoon, and was already offensive in character. All efforts at reduction, including inversion of the body for about twenty minutes, failed, and the child was evidently becoming exhausted from pain and sickness. Explaining the urgency of the case, Dr. Kidd obtained leave from the parents to operate, and it was decided that a radical cure should be performed even if the hernia yielded to taxis under chloroform. The child was admitted to the Bromsgrove Cottage Hospital, and although reduction was effected before an incision

was made, the operation for radical cure was proceeded with. The operation was uneventful, and the child made a rapid recovery and is now quite well.

Obstructive Growths of the Pylorus.

J. E. Allabin (*Journal of the American Medical Association*, Nov. 28, 1899) draws the following conclusions from his observations of these obstructions:

1. Cancer is one of the most potent factors in the causation of death with a tendency to constantly increase in frequency of occurrence.

2. Gastric cancer occurs in about one-fifth of all primary cases.

3. In gastric ulcer the pyloric region is affected in sixty per cent of the cases.

4. The treatment of gastric ulcer directed toward permanent cure is, in the present state of our knowledge, limited wholly to surgical methods.

5. As early total extirpation of malignant growths with the hope of permanent cure is the goal toward which we are constantly striving, and as these growths in gastric cancer occur at the pyloric region in sixty per cent of the cases, it would seem to follow as a natural conclusion that pylorectomy would be the treatment most frequently employed for the cure of this malady.

6. Inasmuch as early diagnosis is the greatest requisite for directing proper radical treatment, the internist and the surgeon should turn their best efforts in this direction.

7. If the operation of pylorectomy be performed before obstructive symptoms manifest themselves and before the occurrence of metastasis, the immediate results will be as favorable as in any other abdominal work, and the remote results as good as in extirpation of carcinoma of the breast.

Sudden Increase of Intra-abdominal Pressure a Possible Danger in the Operation for the Cure of Old, Large, Retained Herniæ.

Dr. Henry O. Marcy, of Boston, at the late annual meeting of the New York State Medical Association, reported two cases where death was attributed to the greatly increased intra-abdominal pressure produced by the return of the displaced organs. The subject is one of more than usual interest, since operation for the cure of hernia is now undertaken by a large number of surgeons, and no reference has been made by any author to danger which may arise from this cause.

On this account Dr. Marcy has reported these cases with careful detail; and his paper merits thoughtful study by those who operate on large herniæ. The author draws the conclusion that where any considerable portion of the abdominal contents have been for a long time displaced, it is advisable to submit the patient to quite a period of retention in bed, with a limited diet and moderate purgation. A loss of ten per cent in weight may not be excessive, and this will mean not only by that ratio a less amount of abdominal contents present at the time of operation, but that there will be a corresponding reduction of the hernial contents to be returned. In even a greater degree will the abdominal wall be thinned and relaxed. Little by little this prolonged period of treatment will be lessened by a more or less spontaneous reduction of the parts, and the circulatory equilibrium will also become more nearly normal.

Dr. Marcy advises that these factors be taken into careful consideration in every case of old, very large, retained hernia to be submitted to surgical treatment. He also thinks with the exercise of such care that the conditions must indeed be very exceptional where the cure of hernia may not be safely effected. In a list of about five hundred consecutive operations undertaken for the cure of hernia by Dr. Marcy, the case reported is the only one where the danger line seemed to be approached when the integrity of the intestinal canal was not involved.

The Treatment of Cutaneous Cancer.

A. Ravogli (*Journal of the American Medical Association*, Nov. 18, 1899) says that formaldehyde in superficial cutaneous cancer is one of the best local applications we have. It is non-poisonous, therefore there is no danger as in the application of arsenic paste. It has the power of penetration into the tissues, therefore an action which spreads deep into the tissues, destroying the cancerous infiltrations. The deep-seated nodular carcinoma of the skin has also been treated by bathing with a four- to six-per-cent formaldehyde solution with much benefit. Curettage, used a great deal by Kaposi and also by Besnier, is a good method for superficial epithelioma, if followed by cauterization, even with the thermocautery, or with formaldehyde. The curettage removes the cancerous tissues on the surface, but does not remove the whole affected mass. Many nests of cells remain in the surrounding derma which the curette cannot reach; in consequence, relapse is promptly at hand. But when curettage is followed by a thorough cauterization, then it is one of the best therapeutic means we have. When we have to do, says the writer, with a deep-

seated nodular carcinoma or with the papillary vegetating cancer, the surgical exeresis is the best treatment. The removal of the whole growth at some distance from the healthy skin is the one means of destroying the growth and preventing infection. In cases where the lymphatic glands near-by are involved, it is necessary to resort to surgical extirpation of the glands in order to prevent relapse.

Operating on Phimosis Without Circumcision.

Dr. Lambert, of Dunkirk (*Medical Press and Circular*, Nov. 8, 1899), operates on phimosis without having recourse to the classical method of circumcision. His method is based on the principle that the phimosis comes from atresia of the mucous membrane, and that it suffices to effect a cure by simply increasing the diameter of the membrane without touching the cutaneous envelope.

After having prepared the parts by means of antiseptic irrigations, and made one or two injections of cocaine to obtain the necessary degree of anesthesia, he seizes the prepuce with three forceps disposed at equal distances from each other. Taking a pair of scissors, he makes a small nick in the mucous membrane between each forceps, through which he introduces the fine point of the scissors, passing between the membrane and skin, and slits up to the sulcus. The prepuce being thus dilated, the glans becomes free. The small incisions are sutured, and the wound dressed in the usual way. The prepuce is then drawn over the gland, remaining thus dilated until the cicatrization is complete.

MEDICINE.

Ten Years' Experience with Typhoid Fever at the Roosevelt Hospital.

W. H. Thomson (*Medical Record*, Nov. 11, 1899), in an article on this subject, in speaking of the methods followed by himself in the treatment of typhoid fever, says that on admission, if at any time before the end of the second week, a mercurial purge of five grains of calomel and thirty-five grains of compound jalap powder is administered, and this purgative is repeated every third night until the close of the second week. The presence of diarrhea is no contraindication toward administration, for it rather seems to check it altogether. It appears directly to lower the temperature as its first effect, and to moisten the tongue. The exclusive diet until the fourth week is equal parts of lime-water and milk. In the fourth week farinaceous

gruels, preferably arrowroot, are added. In typhoid fever the stomach is reduced to the weakness of early infancy in digestive power, hence milk should not be given undiluted. From the beginning to the end of the fever ten grains of pepsin and ten grains of bismuth subcarbonate is ordered every three hours, so as to amount to eighty grains of each in the twenty-four hours. As soon as the tip of the tongue shows the first sign of dryness ten to twenty minims of spiritus terebinthina is given every four hours in emulsion. To check intestinal hemorrhage one-fourth grain of nitrate of silver and one-fourth grain of opium are enveloped, so to speak, in nine grains of resin of turpentine in three pills, and this dose is given every two to four hours. Against the general toxemia of typhoid fever there is, in the writer's opinion, no measure which approaches the cold bath.

THE DEFENSE OF THE CARDIAC ORIFICES OTHER THAN VALVULAR.

D. W. Samways (*British Medical Journal*, Oct. 25, 1899) says that in cases of mitral stenosis, when the auricular contraction is, in the opinion of many observers, prolonged, the absence of regurgitation and of a systolic murmur is due to the auricular defense of the stenosed and incompetent orifice during the whole or part of the expulsive phase of the ventricular contraction, for the ventricle cannot force the blood back into the auricle opposing such regurgitation.

Regurgitation and a systolic murmur may, however, appear as the stenosis advances. For, when the auricle fails to expel its blood in time to become sufficiently small to resist the ventricle when its contraction opposes it, regurgitation must occur in spite of the efforts of the auricle to prevent it. Mechanical dilatation of the auricle will now commence, and with and through it the cardiac breakdown which appears sooner or later in this disease. Temporary recovery may take place with rest, and perhaps by bleeding, by diminishing the blood with which the auricle has to deal in a given time, and allowing it again to become small before the ventricle contracts.

The auricular systolic murmur of mitral stenosis may reasonably be supposed to be presystolic and early systolic, since the auricular systole, like the murmur, runs up to and into the ventricular systole.

Hypertrophy of the auricle, so common in mitral stenosis, would aid or exaggerate the above results.

DIABETES MELLITUS.

Prof. H. Leo, of Bonn, Germany (*Deutsche Med. Woch.*, Oct. 26, p. 705), after quoting v. Mering and Minkowski's conclusions that under normal conditions the pancreas plays a certain rôle in the process of

oxidation of sugar in the system, and the suppression of this activity results in diabetes, referring to the numerous cases of the disease in which the pancreas appears perfectly normal, submits the following hypothesis, which he believes will account for such cases, to-wit: imperfect oxidation of sugar in the tissues of the diabetic (whose pancreas remains in a normal condition) depends upon the presence of a toxin inhibiting the normal sugar-oxidizing function in the system. Experiments which Leo relates in a preliminary communication seem to bear out his theory.

Pulmonary Tuberculosis and Menstruation.

Dr. Neumann (*Berl. Klin. Wochensch.*, No. 21, 1899) calls attention to the diagnostic and prognostic importance of auscultation during the menstrual period. In many patients a rise of temperature can be detected only before and during menstruation, while others will at such time show marked increase in the catarrhal symptoms. Not infrequently one may then detect upon examination tubercular foci in the lungs of suspected cases, even in those patients who seemed at first affected merely with anemia. On the other hand some patients will at such time show marked improvement in the pathological syndrome, which under otherwise favorable circumstances allows of a hopeful prognosis being given.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,

Microscopist to Harper Hospital, Detroit.

A Contribution to the Study of Gout.

William Baine (*British Medical Journal*, Oct. 25, 1899), who has made a large number of experiments in regard to the nature of gout, summarizes the results obtained by him as follows:

1. That the methods in vogue for separating uric acid from blood are not sufficiently delicate for the detection of minute quantities.

2. That the phosphoric acid varies directly with the uric acid excretion, the patient being on a fixed diet.

3. That the alloxan bases in gout are not increased.

4. That colchicum does not seem to have any influence on the excretion of uric acid in gout.

5. That sodium salicylate and thymus increase the excretion of uric acid in gout.

THERAPEUTICS.

The Therapeutic Efficacy of Heroin.

Heroin represents a morphine in which the two hydroxyl groups are replaced by acetyl radicals. The formula for morphine is $C_{17}H_{19}NO_3$, while that of heroin is

$$C_{17}H_{17}=\begin{matrix}\diagup OOC.CH_3\diagdown\\ \diagdown OOC.CH_3\diagup\end{matrix}NO.$$

Heroin is thus a diacetic-acid-ester of morphine.

Max Einhorn (*Philadelphia Medical Journal*, Oct. 20, 1899) says that from his observations in three or four cases of pulmonary tuberculosis a constant improvement (alleviation of the cough) was observed, while in one case, after acting beneficially at first, the drug lost its effect in fourteen days. In five of the seven cases of asthma observed by the writer, its action was good—that is, it diminished the dyspnea and alleviated the cough, although in two of them the administration of potassium iodide in conjunction with the heroin was necessary. In two other cases no improvement was apparently obtained. In two cases of chronic bronchitis improvement occurred in one instance and no results in the other. In three cases of cardiac lesions and slight dyspnea, amelioration occurred in two, while in a third no effect was noted. In two cases of cancer (one of the cardia and one of the stomach) the pains were greatly alleviated. In a case of hyperesthesia of the stomach and chronic bronchitis, the remedy acted well, but produced constipation; and in two cases of gastralgia (one from duodenal ulcer, the other from gastric catarrh) decided amelioration took place. In a case of tabes dorsalis the existing gastralgia and enteralgia were much relieved. It will be readily seen, says the writer, that we possess in heroin a very valuable therapeutic agent. It principally allays cough and relieves respiration, but it has also general analgesic properties which render it of benefit in most painful affections.

The Treatment of Yellow Fever by the Use of Potassium Bitartrate and Salol.

E. F. Nunez (*Philadelphia Medical Journal*, Nov. 11, 1899) says in regard to his treatment of the disease: "I begin the treatment by giving the patient a dose of calomel, followed by a saline purgative, generally Epsom salts, and immediately after I commence the use of a solution of potassiun bitartrate and fresh lime-juice, and the salicylate of phenol or salol, the latter preferably in tablets, every two, three, four, or six hours, according to indications. With the cream of tartar

the urine is rendered alkaline, and the renal function is stimulated by its diuretic properties. The local action of this agent on the stomach is no less important, since it is pleasant and soothing, quenches the intense thirst, relieves the nausea and vomiting, and by its laxative properties insures free movement of the bowels. With salol a twofold action is obtained: first, the antisepsis of the intestinal tract; and secondly, the reduction of the temperature by its antithermic properties. The drug is well borne, not only by the stomach, but also by the kidneys, and apparently tends to reduce the amount of albumin in the urine. No alcoholic drinks or nourishment are allowed during the first stage of the disease. The epigastralgia and rachialgia are treated exclusively by counter-irritation with sinapisms. During the second stage the salol and cream of tartar, accompanied by large quantities of diluent drinks, especially warm water to which a few drops of lime-juice has been added, are to be continued until defervescence takes place."

Anusol.

Anusol (*Medical Review of Reviews*, October, 1899) is a combination of bismuth with iodo-resorcin-sulphonic acid, having a specific action upon the rectal mucosa. It is a powerful disinfectant and deodorant, an efficient desiccant for suppurating or hypersecreting surfaces, and an astringent and granulation-promoting agent. It relieves constipation, hastens the removal of hardened and impacted feces, softens and moistens the excrementitious matters, and causes easy and painless defecation. It has no unpleasant by-effects, contains no narcotic substances, and can be freely used in both sexes, at all ages, and at any time.

Anusol is recommended in catarrhal affections of the rectal mucosa, in proctitis, intestinal tuberculosis, fissure of the anus, local ulcerations, and for the relief of constipation, tenesmus, pruritus ani et vaginæ, prostatic hypertrophy, and all pruriginous and painful conditions of the rectum and adjacent organs.

Anusol is supplied only in the form of suppositories, each containing about ten grains of the drug with zinc oxide, balsam of Peru, and the excipient—one to be introduced every night. This dosage suffices for ordinary cases; severer ones require a suppository night and morning in the beginning.

A New Local Anesthetic Solution.

F. G. Lydston, in a communication to the *New York Medical Record*, vol. liii, says: "I desire to call attention to what promises to

be a new departure in genito-urinary surgery. I have used as a substitute for cocaine in a number of cases of urethrotomy a ten-per-cent solution of antipyrin in a one-per-cent solution of carbolic acid. As far as my observations have gone, the solution appears to be quite as efficacious as cocaine. In meatotomies, when, as is well known, the skin incision is usually painful, I have found even less complaint than when cocaine is used.

"The advantages of the agent as compared with cocaine are: (1) Absolute safety; (2) freedom from constitutional effects; (3) distinct lessening of hemorrhage after operation; (4) less disturbance of nutrition of the wounded tissues.

"The solution should be fresh, and should be allowed to remain in the urethra for ten minutes, as a rule. I have, however, begun cutting within five minutes after injecting it. I would suggest the antipyrin solution for nose and throat work. It will at least make a safe foundation for further anesthesia with cocaine. Absorption of the cocaine and hemorrhage will both be inhibited, thus adding greatly to the safety of operations. Unlike that of cocaine, the styptic effect of antipyrin is not followed by vascular relaxation, and often almost uncontrollable hemorrhage."

Electricity in Respiratory and Cardiac Failure.

A. D. Rockwell (*Medical Record*, Nov. 11, 1899) says that direct electrization of the pneumogastric and phrenic nerves calls into activity the physiological function of these nerves. In the case of the former the action of the heart is depressed; in the case of the latter respiration is accelerated and strengthened.

Percutaneous applications in therapeutic doses, especially with the faradic current, altogether fail to affect the pneumogastric appreciably, while the same method readily affects the respiration through the phrenic nerve.

In respiratory failure, therefore, whether due to the poison of opium, aconite, or in apparent death from drowning, electrization is a powerful antidote.

In heart failure from chloroform narcosis also the faradic current is a legitimate method of resuscitation, by keeping up the respiration without depressing the heart.

Stypticin in Uterine Hemorrhage.

Boldt (*N. Y. Med. Woch.; Centralbl. f. Gynecol.*, No. 37, p. 1159) reports as follows concerning his experience with stypticin: (1) Favorable results in the menorrhagia of young chlorotic patients were

unaccompanied with pathological changes. (2) Same results in menorrhagia multiparum without chlorosis, but showing moderate ovarian hypertrophy. (3) Prompt and reliable effect in postpartum hemorrhage incident upon placental retention and continuing after curettage. (4) Favorable action in the hemorrhage of para- and perimetritis after miscarriage, and (5) after childbirth. (6) No results from its exhibition in cases of postpartum hemorrhage from placental retention and before the womb had been cleaned out, (7) and (8) nor in hemorrhages from myxomatous or carcinomatous tumors. (9) No results in hemorrhagic endometritis unless preceded by curetting. (10) Same in fungoid endometritis. (11) Results were unreliable in hemorrhages of chronic metritis or endometritis, and (12) insufficient in retroflexion with chronic endometritis. (13) Most favorable influences over the hemorrhages incident upon change of life. (14) Those due to puerperal subinvolution. (15) Such hemorrhages which could be ascribed to no definite cause. (16) Hemorrhages due to traumatic peri and parametritis proved amenable to the exhibition of stypticin.

Quinine Hypodermically.

It has long been a desideratum, says N. S. Lincoln (*Medical Record*, Nov. 18, 1899), in the practice of medicine to procure a solution of quinine which can be administered hypodermically without causing irritation to and blistering of the cuticle. He has for the past two years been using a fifty-per-cent solution, dissolved in muriatic acid, which produces no ill effect whatever, and he also finds excellent results from giving the same liquid in capsules. Muriatic acid, being native to the stomach, assimilates more readily than either tartaric or sulphuric acid, and the quinine is dissolved more rapidly and thoroughly than it can be with the other two acids. He has used this solution (fifty per cent of quinine in muriatic acid) in unusually large doses without any of the uncomfortable results generally attending the use of sulphate of quinine, giving as much as thirty grains in capsules without any resultant headache or ringing in the ears. The quinine acts directly and happily, administered in capsules holding ten grains each. He therefore recommends the formula to the profession used as above stated.

Aspirin.

A new salicylic preparation (acetyl salicylate) has been recently introduced (*Medical Press*, Nov. 8, 1899) under the name of aspirin. It is in the form of crystalline needles, soluble in water at 37° C. at the

rate of one per cent. In alcohol, ether, etc., it is about as soluble as other salicylic preparations. The most important distinction between aspirin and other salicylic preparations lies in the fact that it does not irritate the mucous surface of the stomach; further, it splits up so slowly in the gastric juice that it passes out of the stomach undecomposed and undergoes this process only in the alkaline intestinal juices, the blood, and in the tissue lymphs. It is useful in all diseases in which salicylic acid and sodium salicylate have been employed, especially in gout, articular and muscular rheumatism, sciatica, dry pleurisy, etc. An agreeable form of administration is aspirin one grain, sugar three to four grains, stirred round in a little water and taken three or four times a day.

From the advantages it possesses over the crude salicylin preparation, its agreeable slightly acid taste, the absence of noises in the ears, irritation of the stomach when taken, aspirin is likely to come rapidly into favor.

Atropine in Asthma.

Riegel, of Giessen, at the seventy-first meeting Deutscher Naturforscher und Aerzte (*Berl. Klin. Woch.*, Oct. 2, 1899, p. 885), after discussing the various theories advanced to date and bearing upon the pathogenesis of asthma, proceeds to investigate experimental studies upon the rôle of the peribronchial muscular fibers, which rôle has but lately been demonstrated. By irritation of the pneumogastric Einthoven succeeded in raising intrathoracic pressure to 120 millimeters water and more. Experimental researches bear out the theory of peribronchial muscular contraction. Asthma is most assuredly a neurosis, and experimental research seems to show that whatever its nature, be it reflex or idiopathic, the stimulus is transmitted along the pneumogastric line. Should this prove true, however, it behooves us to substitute for the treatment of the attack, and in lieu of the usual narcotic preparations, such means as will reduce pneumogastric excitability. Atropine fills this indication, and Riegel suggests its use in hypodermic injections, which he has often found effectually to cut short a threatening attack of asthma.

Peronin, a New Anesthetic for the Eye.

Quaita (*Settimana Med.*, Oct. 7, 1899) has upon the eyes of thirty healthy adults used a five-per-cent solution of peronin (chlorhydrate of benzolic ether of morphine). A burning sensation is at first caused, which lasts but a short time and is soon followed by well marked

anesthesia, which lasts for about ten minutes. The diameter or mobility of the pupil, or the accommodation, visual acuity, or eye tension, is in no way affected by this drug. The corneal epithelium was never affected nor infiltrated, as may happen after cocaine. The intense vascular injection with lacrimatous and serous chemosis is the great disadvantage of peronin as an ophthalmic anesthetic. Quaita thinks that it may be more useful than cocaine in enucleation or evisceration of the globe, as it produces deeper anesthesia and the increased vascularity does not matter in this case.

Bromide of Strontium in the Treatment of Epilepsy.

N. Cullinan (*Lancet*, Oct. 7, 1899) says that from his experience in the use of various bromides the preparation of strontium is far more effectual in the treatment of epilepsy than is that with potassium, sodium, or ammonium. Its sedative action is well marked, causing but slight, if any, disturbances of the gastric functions, and appearing to act as a tonic to the nervous system generally. It does not impair the mind of the patient or produce anemia; while, on the other hand, the external evidences of improved blood-supply are well marked. On the whole it tends to produce a healthier tone of body and mind. The addition to each dose of the salt of ten grains of borax appears to act beneficially, but has the disadvantage if continued for a time of causing a low form of gastritis with flatulence, which is very distressing to the patient. Otherwise it is a good adjunct to the treatment.

Hydrogen Peroxide in Prussic Acid Poisoning.

Kobert (*Rostocker Aerzte Verein; Munch. Med. Woch.*, No. 28, p. 945) recommends the timely use of hydrogen peroxide in cases of prussic acid poisoning. This treatment, which he discovered several years ago, when employed at the earliest opportunity, has been successfully tried both in England and America. He further recommends its introduction into general use in emergency cases.

Antitoxin in Whooping-cough.

Gilbert (*Rev. Méd. de la Suisse Rom.*, 1899, No. 6; *Berl. Klin. Woch.*, 1899, No. 35) secured in all cases, even in those which had withstood all previous medication, remarkably rapid improvement. Identical results have been obtained by Lotti and also by Cerioli, so that the efficiency of antitoxin in whooping-cough is now vouched for by three different authorities.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

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The National Recognition of Eye strain Reflexes.

Drs. Geo. M. Gould and Helen Murphy (*Annals of Ophthalmology*, No. 4, 1899) report the results of their comparative review of the ophthalmic text-books in regard to the proper recognition by Continental, English, and American specialists of eye-strain reflexes. The following are their conclusions:

1. The fallacy of the old proverb *Ex oriente lux*. In the first place it is the Teuton, not the Latin, who discovered the fundamental optic laws upon which is based the knowledge of the facts and results of eye-strain. On the other hand, it is almost solely the most western, the practical American, who has developed and put to use the application of the facts which constitute their value, and which in itself amounts to a discovery of tremendous importance in applied therapeutics, and in the relief of human suffering.

2. The slowness with which medical discovery, at least in this special department, is brought into the authoritative text-books. In the Latin countries the writers of the text-books seem scarcely to have heard of reflex ocular neuroses. These books appear to be made as if by machinery and by one machine. The statements are so generalized and colorless as to bear no relation to actual treatment of disease in living patients by living physicians. They remind one of the Hegelian, "Being and non-being are identical." In Germany and England hints and allusions are seen in the text-books that the organism is a unit and that organic disease may at one time have been preceded by functional causes, and that disease in one place may be caused by disease in a different part; but the half-scorned and half-ignored admissions have no effectiveness until we reach the wide-awake and thoroughgoing American. Even with us the frank and full emphasis is not so generally given as it should be.

3. But even when acknowledged in the specialists' text-books, the recognition and acknowledgment of eye reflexes in the books and practices of the general physician are still farther from being admitted. We do not believe that we exaggerate when we say that in America itself a million patients are to-day being treated for stomachal, nutritional, nervous, and other reflex disturbances by drugs and what not, when their diseases are due to eye-strain. Every year,

even in the United States, there are a hundred articles on headache which might as well have been written a hundred years ago, so far as truth and practical value are concerned.

4. The summary of the whole matter is the lesson that as physicians we must all wake up and learn the new truth; we must keep up with the knowledge of the younger men and incorporate in the text-books that which is rational and has the sanction of clinical test; we must keep our minds from ruts and habits and prejudices, must recognize that a very large proportion of disease is functional before it is organic, that it is always subtle and often far-coming, and that routine is the curse of intelligence.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Subjective Perversion of Smell.

Noquet, in a paper before the Société Centrale de Médicine du Nord (*Internationales Centralblatt für Laryngologie*, etc., vol. xv, No. 6), gives a review of the history and chief symptoms of subjective parosmia and details of two cases from his own practice. The first occurred in the person of a nervous woman forty years of age, who always experienced at the close of an attack of coryza a foul odor. No alteration could be discovered in the nose. Noquet applied the galvanic current, but soon lost sight of the patient. The second case was a man fifty-four years of age, who after a coryza always noticed a foul odor at the moment of eating. This patient was not ill in any other way and also was not a nervous man. In the nose there was a decided hypertrophy of the mucous membrane of the middle turbinated body, which was in contact with the septum. After the destruction of this hypertrophy the parosmia permanently disappeared.

Statistics of Operative Treatment of Laryngeal Cancer.

J. Sendziak, of Warsaw (*Internationales Centralblatt für Laryngologie*, etc., vol. xv, No. 6), has published the known statistics of reported cases of the operative treatment of laryngeal cancer. Up to the beginning of the year 1898 the entire statistics contain in all 640 cases treated by the four following surgical procedures: (1) treated by endolaryngeal operation, 36; (2) by means of laryngofissure, 136; (3) partial resection of larynx, 201; (4) total resection

of larynx, 267. The results obtained by these various methods are summarized as follows:

1. Endolaryngeal operation: absolute recoveries 9, relative recoveries 5, recurrences 14, died as result of operation 0, result unascertained 11.

2. In the cases where laryngo-fissure or thyrectomy was performed there were: recoveries 17, relative recoveries 17, recurrences 78, died as result of the operation 12, result unascertained 16.

3. Partial extirpation of the larynx: absolute recoveries 26, relative recoveries 20, recurrences 63, died as result of operation 44, result unascertained 27.

4. Total extirpation of larynx: recoveries 12, relative recoveries 24, recurrences 81, died as result of operation 94, result unascertained 32.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
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Cancer of the Skin.

In a recent clinical lecture on "Cancer of the Skin," delivered at the London Hospital by Jonathan Hutchinson, F.R.C.S. (*Medical Press and Circular*, Nov. 8, 1899), the lecturer says, in part:

"In epithelioma of the lip or 'pipe cancer' the lip hardens and cracks under the pressure of the dirty pipe, the sore becomes warty at its edges, a cauliflower-like surface is developed, the glands under the jaw rapidly become involved, and fatal systemic infection is complete. In striking contrast with this is the cancer (flat-celled) of the eyelid or cheek, which may run for twenty or thirty years, and destroy almost the entire face without involving a single gland, or threatening the life of the victim. This is not a matter of region solely, because we may also have upon the cheek the 'crateriform ulcer,' which, though rare, is rapidly fatal.

"In other cases of skin cancer the disease may make its appearance in freckles, which, after childhood, are often to be regarded as abnormal. Their presence also often coincides with a tuberculous tendency.

"An abnormal deposition of pigment is always to be regarded with suspicion. Moles are frequently the starting-point of malignant disease, usually sarcoma, especially those which are not congenital. Curiously enough, they may be the initial point of a general metastasis, and yet be very little affected themselves.

"The constitution of the skin in which cancer originates has a marked influence upon its character. Rodent ulcer, for instance, is extremely mild and superficial upon the temple, but much deeper and more rapid upon the eyelid or the alæ of the nose. Xeroderma pigmentosum is a freckle cancer in the young, and in the 'second childhood' of senility we find again a tendency to develop freckles in which malignant disease has its origin. The black patches which grow around the eyelid in old women are especially liable to degenerative changes of this description. Cancer is emphatically a product of senile tissues, and while a parasitic origin may some day be demonstrated, yet all attempts so far are conspicuous failures. The process is a disturbance of cell-nutrition, of internal balance, quite independent of any external cause. It is, in the nature of it, a self-originating process in the senile period.

"Inheritance, though not a very common factor in cancer, is unquestionably a potent one. Many of the cases of cancer at an unusually early age that I have seen have been in children of cancerous parents. The disease does not necessarily attack the same organ when transmitted, more frequently not. What is inherited is the tissue tendency to rebel, and this may take place in any organ or in connective instead of epithelial tissues, giving rise to sarcoma instead of carcinoma.

"As to the increase of cancer, I think it is greatly overstated, though there can be little question that cancer is actually increasing slowly, but steadily; simply for the reason that the proportion of those surviving to middle age, and those becoming liable to it, is increasing."

Lesions of the Skin and Carcinoma.

The eczematous condition of the nipple, which, since Sir J. Paget drew attention to it (*Medical Press and Circular*, Nov. 8, 1899), is admitted to exceed carcinoma of the breast, has raised the question of the possibility of the existence of a precancerous stage of cancer, and the theory receives a good deal of support from the connection which appears to exist between the two diseases in this instance. But further confirmation in this regard has lately been brought forward, curiously enough, also in connection with a lesion of the skin. Hartzell has collected a series of cases of psoriasis, treated by arsenic, in which epithelioma ultimately developed. So far the series consists of eleven, and the interest of the cases is naturally centered in the etiology of the malignant degeneration. Is the disease caused by the arsenic, or is it only another proof of the existence of a precancerous stage? As

workers in arsenic have been proved to possess no special predilection for cancer, it is possible that the reasonable theory as to the existence of a precancerous stage of cancer is, in this instance, as in the former one, correct. The belief that cancer is a parasitic disease would in no sense be lessened by the adoption of this theory, for the natural conclusion is that there must be some special preparation of the soil before it can become a cultivation medium for the development of cancer microorganisms.

Skin Rashes in Cerebrospinal Fever.

Osler, in the Cavendish Lecture on the Etiology and Diagnosis of Cerebrospinal Fever (*British Medical Journal*, vol. i, 1899), states that during an epidemic observed in Baltimore a skin eruption was present in thirteen of the twenty-one cases of cerebrospinal fever observed—in eight cases, herpes; in four, a diffuse erythema about chest and abdomen and over joints; petechiæ in eight cases, extensive in three. In three cases a peculiar rash was observed—a diffused livid erythema, with a development of a purpuric herpes.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Cocaine in Obstetrics.

Bousquet, of Marseilles (*Bulletin Médical de Quebec*, vol. i, p. 43), concludes his introductory remarks on the surgical possibilities of cocaine with the statement that the drug is most efficient as a local anesthetic when injected into or under the skin.

Only since 1885 has cocaine been made use of in obstetrical practice, and Doleris at the meeting of the Académie de Médecine, held January 17, was the first to proclaim its analgesic influence on the genital organs. He and Dubois experimented with four-per-cent salves and solutions applied on the cervix during labor, and in the same month Jeannel noted a few successful cases under similar circumstances. In 1886 Barton Hirst reported two cases in which labor pains were attenuated by the use of cocaine. Dalbs, during the same year, secured good results from twelve per-cent solutions applied at the vulvar orifice and in the vagina. At about the same time Hartzhorne employed to advantage a mixture of 6 parts cocaine, 24 of

vaselin, and 20 of glycerin, carried to the os by means of a syringe. Later attempts were made by Auvard and Lecheyron, and also by Chaigneau (Thèse de Paris, 1890), while Bousquet carried on independent research. He reports thirty-two cases, among which were ten of dystocia necessitating intervention, in every one of which he injected half a hypodermic syringeful of a five-per-cent solution of cocaine into each of the labia majora near the fourchette about five to ten minutes before spontaneous or, as the case might be, artificial delivery.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Modern Treatment of Insanity.

The *Hospital*, in an article on insanity, concludes as follows: "In the closing decade of our century we are standing on the threshold of a new epoch in which insanities are beginning to be studied and investigated as other diseases; progress, steadily but surely, is making its way in the growth of knowledge regarding etiology, hereditary conditions, pathology, and therapeutics; the brain as the affected organ and every other part of the body as partners in the morbid manifestations, which in their totality we call insanity, are receiving examination with all the wealth of methods and means that modern science supplies; statistical and sociological studies are contributing their quota toward the elucidation of the problem, and the closing years of the century are full of promise and hope for the future. Perhaps the time is not far distant when by intelligent social and legislative measures, by the growth of an enlightened public opinion, and by the spread and diffusion of medical and scientific knowledge, much more may yet be accomplished toward the treatment and prevention of the insanities. Suffice it, however, for the present century that it has completed the humanitarian epoch, and inaugurated the scientific."

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ORIGINAL CONTRIBUTIONS.

THE TEMPERANCE QUESTION IN THE ARMY.

BY W. L. PARKER, M.D., WESTBORO, MASS.

Fort Cummings, New Mexico, built of adobe "sun-burnt bricks" in 1866, and abandoned a few years ago, was a type of frontier stations or forts which have pretty nearly ceased to exist. Far to the southward of the dreary "Valley of Death," marking the continuation of Jornada del Muerto—"journey of death"—a speck in the great lonely desert, it nestled as if clinging for safety at the foot of Cook's Peak. Beyond Cummings in almost every direction stretched the great prairies, but to the southwestward, beyond the Sentinel Mountain—the mouth of the lonely Cañon—showed the trail to Fort Bayard, another "doby fort." From the land of the Chippewas and the Sioux, to the fastnesses of the unconquerable Apaches, from the deadly Smoky Hill far over the Pacific slope, little forts garrisoned by one or two companies of soldiers guarded the cradle of western empire and shielded the emigrant from the cruel and warlike Indian.

From West Point were sent out to these dreary posts the very best specimens of manhood—eager for military glory, but soon homesick and disgusted with frontier life. The soldiers, although brave and competent in active service, fretted at their useless, aimless existence, as it seemed to them, and thought little and cared less as to their own or their country's future if they could only "kill time." Visitors were not frequent. The regular call of the dashing pony express riders, the occasional visit of a cowboy or frontiersman, readily gave the excuse for extravagant celebrations. Amid such surroundings reading soon became monotonous, smoking too light a pastime, and drinking and gambling easily became favorites for most every one sooner or later. The West Point boy with his first

pair of shoulder-straps gazed astonished at the sight of his superior officers—playing cards with bullets for chips, and frequent libations of wretched liquor called "whiskey" poured out to keep up his excitement. The evil effects of such a life were everywhere to be found—in cattle ranch and reservation, in company quarters, and in the officers' mess. Men whose home training taught them to abhor such associations became drunkards and gamblers in short order, and with the increasing dissipation self-respect was sadly shattered and the road to every vice was open.

The first stages of settlement in the great west were ever of this class. Drinking and gambling have been the avant-couriers of our American progress. Everywhere, whether north or south, the saloon is the first establishment. It takes a long time for churches and schools to get a start; a shelter tent or a prairie-schooner can be made use of for saloon purposes at once.

The whiskey is the foundation for the mischief; every undertaking begins with its employment; battle, murder, uprising, all are encouraged by its devilish influence. Manhood is degraded, the body is prematurely aged, the mind is dazed, stupefied, diseased, and acute mania, delirium tremens, if not immediately victors in the struggle, witness the giving of the death-blow.

On the other hand it is surprising to find that many men, apparently whiskey-soaked, succeed in reformation more or less permanent.

It does not require any extraordinary experience to bear witness to the battles and rows at frontier posts ending in suicides and even homicides. One terrible murder directly traceable to whiskey came under my observation; and I have known more than one officer who has manfully struggled to overcome the temptation to drink. One splendid fellow wrote me a letter imploring me to help him to win in his battle against whiskey, until now the very name of the poison is so distasteful to me and brings to mind such scenes of sadness and horror that I would do anything to prevent its use everywhere, as well as amongst the brave soldiers of our army, regular or volunteer. It is the associations, it is the *conditions* of life which lead men into temptation, and drag them unwillingly to ruin. It has been said that "Reason cannot show itself more reasonable than to leave off reasoning on things above reason." There are those who dismiss the subject of the liquor curse as one unfathomable. These men are not enemies of temperance, but confess they are unable to form an opinion as to the best methods for overcoming the injurious effects of alcohol. There are those, carried away by the greatness of the subject, who become overenthused and are condemned as "cranks." Call no man a crank who is honestly at work in the redemption of mankind. This

very day I have read that intemperance is certainly diminishing in our land, and that the *cheapness of beer* is to be credited with some of this result! Undoubtedly the Germans who drink beer—but very different in quality from that which is provided in this country—*are* spared temptations for whiskey, brandy, etc. That temperance in the army is increasing, and that less whiskey and more mild beer is called for, there can be no doubt.

The old-time sutler has disappeared. He was ever on the alert on pay-days, eagerly scooping in the soldier's pay for the wretched supplies he had afforded him.

The government after a while recognized that the whiskey dealer was a curse to the army, and war was declared upon him, resulting in a series of battles lasting for years. Inch by inch he has been driven backward, until to-day his power is limited, and his glory well-nigh departed. The soldier is able to look his old enemy in the face and to withstand temptation more readily, and to rejoice in the manhood of victory over the allurements to drink. With drunkenness unpopular the physical well-being of the soldier can be maintained, and his respectability cultivated. Drink catered to all that was low and vile, and looked with jealous, hateful eye at all true manliness and self-respect. It has ceased to be respectable or soldierly to be found half tipsy. There are some of the old-timers in our army who still cling to the bottle. They were made of such manly, courageous stuff that even whiskey could not kill them, but that it has prematurely aged some of them there can be no doubt. The bravest men I have met, either in the army or navy, were not those who swore the loudest or who boasted that they could drink as much as the next, although I must confess I still know of men who drink and gamble and are undoubtedly good, true men and valuable officers notwithstanding! Their strong personalities could stand the damage which would be fatal to many. They do not realize that their very manhood gives encouragement to others to drink who are not as able as they to overcome the poison, and react against the damaging influences. Misguided methods of men preaching temperance, but lacking in manhood and good sense, have disgusted men of mettle and courage, and a cause for the betterment of mankind has suffered through such unworthy apostles. Army men are by habit called upon to depend more or less on alcohol in some form, and in choosing between two evils the lesser is certainly to be recommended. War is not a Sunday-school picnic, and in the stress of battle stimulants are depended upon by many.

Sensible and worthy teachers must demonstrate by precept and example that liquor must be used very sparingly, if at all. Excess is

the cemetery of all enjoyment. On the other hand, who would have withheld a flask of pure brandy to the weary and exhausted soldiers in the trenches before Santiago? Hard and fast rules are easy to write, but difficult to enforce, and total abstinence for an army is and ever has been and always will be an utter impossibility. The responsibilities of the commanding officer are very great, whether in a lonely station or in a city barracks, or in the active field of war. To guard a soldier from those who would do him harm, and from his own desires and appetites which might impair body and mind, requires great wisdom and prudence. The commander-in-chief of the United States army should have *larger influence*, and less chance for discouragement by meddling outsiders. General Miles is not only a brave and competent officer, but is a gentleman honestly interested in the real welfare of all his army, officers and enlisted men as well. The remedy is in substituting something which is harmless for that which is harmful.

Instead of the drinking saloon, the properly organized canteen; instead of gambling, entertainments which amuse and interest; instead of whiskey, beer or coffee or cocoa, in a pleasant, orderly room. Do not force the soldier to take Christian teaching as a dose; lead him if you will, but do not attempt to drag. Do not after Santiago's campaign ever ask an American soldier to give up his pipe and tobacco. Those of us who have served on the plains will testify that we can go without food, and even warmth and shelter, but we must have our tobacco; and whoever classes smoking with drinking can hope for few converts among veteran soldiers.

It has been said that smoking easily leads to other vices, but in my experience I have found that it leads away from vice. While whiskey excites and is apt to bring out the evil in men's minds and conduct, and may encourage careless speech, the pipe is soothing, quieting, comforting and companionable. The heart weighed down with loneliness and hopelessness turns gladly to the pipe and gets refreshment, which the drinker can never find in spirituous liquors. The Italian, the Frenchman, and the German drink their light wines or beer, sitting down at table, and taking food at the same time. It is used in moderation and as a food for man, woman, and child. The American gets his liquor in a place which is the resort of the drunkard and the tough. He makes no long tarrying, but gulping down his dose sometimes repeats it until he fancies he can endure no more, and then, half-reeling, issues forth to a fate which may in a moment forever cloud his usefulness or his happiness, or both.

In the *Digest of Metabolism*, in experiments in which the balance of income and outgo was determined, Drs. Atwater and Langworthy reported very fully concerning the use of alcohol. In part their conclusions were as follows:

In experiments made by Mogilianski, of St. Petersburg, in 1889, the object was to study the influence of alcohol on the assimilation and metabolism of nitrogen and the assimilation of fats. Experiments with fifteen subjects were carried out. All the subjects were young and healthy, the majority being students of the Military Medical Academy. The food consisted of meat freed as much as possible from fat, milk, bread, butter, tea, water, and in some cases beef tea and jelly. Each experiment covered ten to fourteen days, and was divided into periods, one with and one without alcohol. Food was taken three times a day, and each meal was accompanied by a dose of alcohol during one period. The amount of alcohol (absolute) given to the subjects daily varied from 60 to 140 cubic centimeters; it was diluted with distilled water. Some of the subjects were long accustomed to alcohol and consumed much of it; others drank it only occasionally; and still others abstained altogether from alcoholic beverages. The portion of alcohol administered to each was determined by his habits, the rule being to give a sufficient quantity to cause slight intoxication.

The author draws the following conclusions: Temporary drinking of alcohol in moderate doses by those accustomed to it increases the appetite and causes an improvement in the assimilation of the nitrogenous constituents of the food. The assimilation decreases in persons not used to alcohol. The assimilation of fats decreases under the influence of alcohol. Persons not accustomed to alcohol are more affected by it than those accustomed to it.

Experiments were made by Parkes in 1872 to study the effect of alcohol and exercise on the human body. The subject was a powerfully built Scotchman. He was very temperate, drinking only a little beer and occasionally spirits. The food in these experiments was oatmeal and milk. The subject consumed 355 cubic centimeters of brandy daily. When no work was done the subject took exercise by walking slowly. The work consisted of digging ground for eight or nine hours per day. He was fatigued by this labor.

The principal conclusions were as follows: Brandy did not affect the excretion of nitrogen during exercise or when no work was done. The brandy increased the action of the heart to such an extent that it lessened the amount of work the subject was able to perform.

In my own experience on the frontier, whether in the bitter cold of northwestern Minnesota with the mercury frozen, or on the wind-swept prairies of Texas with northers raging, or when crossing the hot deserts of Kansas and New Mexico—in winter's freezing cold or summer's heat—never have I felt the need of liquor to increase my appetite or to cheer away depression, although I have always had ample stores of the best liquors under my control.

If liquor in any form could overcome the disease known as nostalgia (homesickness), of which many a good soldier perished last summer in Cuba, and which has caused the death of brave troopers west of the Mississippi as well, I would not hesitate to prescribe it. But I do not believe that the benefits derived from the use of whiskey are worth mentioning, when we survey the frightful list of sorrows and even homicides and suicides which so many have witnessed.

Reforms for the soldier cannot be brought about by meddling outsiders; the work must be accomplished through the regular military channels, but above all by the influence of good associates—not omitting the encouragement of manly, rational religious influences.

Everything which tends to improve the self-respect of the soldier makes evil of all kinds less likely to occur.

By justice and generous and honorable treatment the soldier's heart is filled with hope and self-respect; by the neglect of these necessary incentives despair and discouragement are fostered. In such men the unwise administration of affairs is liable to produce discord and confusion, which might easily assume mutinous proportions. Everything which really benefits the soldier is for the general good of the army; manliness and self-control are the evident flowers, and the fruit competent, well-measured strength and fortitude.

LATE IDEAS REGARDING SURGICAL ANTISEPSIS.

BY A. G. ELLIS, M D., PHILADELPHIA, PA.

Bacteriology has placed antisepsis on a sound basis. The aim of surgeons now is to make it complete and perfect a method which will absolutely insure against the introduction of infection during operative procedure. It is a hopeful sign that the general practitioner is becoming keenly alive to the necessity, and at the same time the possibility, of disinfection and antisepsis. It was for a time considered by a great many that antiseptic precautions were "fads" that belonged to the great hospitals. This belief was due partly to an erroneous idea regarding the soundness of the principle itself, and partly to the mistaken notion that, even if valuable, it was beyond the reach of the house-to-house surgeon with his limited facilities. That any physician at present doubts the utility of such measures seems incredible, and that phase of the subject may be dropped at once. That the other side of the question does present serious difficulties must be admitted. But these are gradually being overcome, and even at present, with the knowledge of infection and its transmission and prevention obtainable, the practitioner, whether he be in a city or the

most remote country districts, is guilty of negligence if much sepsis follows his path.

One antiseptic, and the best one, can be obtained everywhere—heat. Sterile gauze can be procured in packages and kept on hand. Compact and portable boilers, so arranged that when opened the lid forms a second tray, are made for sterilizing instruments by boiling. Prolonged washing and scrubbing with soap and running hot water goes a great way toward sterilizing the hands, in fact sometimes renders them completely sterile. Those who think the general practitioner can do little in this line should read the case narrated by Lavelle in *The Jeffersonian*, No. 2. A boy in the wilds of West Virginia had his leg crushed. Twenty miles of almost impassable roads lay between him and proper surgical appliances. The venerable local practitioner, with a few antiquated instruments, and but little knowledge of surgery, felt that the boy must die. But the student boiled water, sterilized instruments—including a meat saw—boiled shirts for bandages, and horsehair and fiddle-strings for sutures and ligatures. Then they sterilized the site of operation and their hands the best they could, and amputated the thigh in the middle third. Some fluid resembling pus formed in the wound for a few days, but the boy made practically an uneventful recovery. He owed his life to antiseptic precautions and to antisepsis obtained under the most discouraging circumstances that could well be conceived. Antisepsis is not for hospitals alone; it is for every place where the knife is used.

The latest investigations of surgeons have been made with the view of determining the aid rendered by gloves of different materials in the maintenance of asepsis during operation. The results arrived at vary somewhat according to the individual success of the different observers. Generally speaking, rubber gloves have given good satisfaction, and in most instances they are to be preferred to those of other material. Their cost and great liability to tear are points against them. One of the most enthusiastic users of rubber gloves is McBurney. After nearly nine months' use of them in all varieties of operations he states (*Annals of Surgery*, July, 1898): "No change of methods has ever been so completely and delightfully satisfactory as the use of india-rubber gloves while operating." In judging of the results of these varied operations he used the highest clinical standard possible, and he never before saw such uniformly good results. Primary healing followed in every case. Contrary to the experience of some other observers, McBurney finds that the sense of touch is not blunted by the gloves; a feeble pulse is well felt, as are also adhesions, slight irregularities, changes in consistency, etc. He in fact considers that the touch may even be rendered more acute by the fact that the

fingers are not hardened by callus and the repeated use of disinfectants. Operators, assistants, and nurses put on a fresh pair of gloves for every operation, which is a very important point in their use. They are boiled in a one-per-cent solution of soda for half an hour and then washed in salt solution.

Coley (Progressive Medicine, vol. ii), after reviewing McBurney's article, states his belief that the advantages therein set forth are real, and that a more general use of gloves will be followed by a great improvement in results. For delicate operations, such as separating the sac from the cord in radical cure of hernia, especially in children, he believes that very thin rubber cots may be advantageously substituted for the glove in the case of the operator himself, all the assistants wearing gloves.

The American Year-book (1899) gives the views of several leading surgeons on this question of gloves. Halsted says: "I wear gloves if, for example, I am removing a foreign body from the knee-joint or suturing a freshly broken patella, or exploring the abdomen, or doing a simple hernia operation, or any other simple operation which does not require a delicate touch or dexterity, and which, if suppuration supervened, might be followed by unpleasant results." Halsted's assistants always wear them. Manteuffel uses rubber gloves in septic cases, in clean cases coming after septic ones, in sudden accident, or when there is an area of suppuration on his own hand. Mikulicz uses thin white cotton gloves. The sense of touch is not greatly diminished. The glove hugs the finger closely when it becomes wet. He considers operating with gloves to be equivalent to having "boiled hands." Other operators have no confidence in cloth gloves, because when wet they transmit bacteria. This has been proved by experiments carried out with that purpose in view. Some prefer silk, as blunting the sense of touch less than those made of rubber. The use of gloves is becoming more common in hospitals, and in cases of emergency and military surgery, where time is important and there may be a scarcity of water, they are of great value. In cases of operation in the patient's house, especially in country practice, where disinfecting facilities are not abundant, they are again of great use.

The preparation of the hands when gloves are not used is a much-debated question. At first great faith was placed in the use of chemical germicides, but this method has been supplanted by better ones. As before stated, scrubbing with soap and hot water is found to be more effective than the use of germicides in the degree of sterilization obtained. This fact is especially valuable because of the simplicity of the process and its universal adaptability. Kelly's method with potassium permanganate and oxalic acid solution is used

quite largely, though Reinecke considers that it is not always certain. Keen finds that it causes dermatitis. Deaver employs it after washing and disinfecting, and uses carbolic acid solution afterward.

Keen and Da Costa use Weir's method, which is described as follows: The hands and forearms are scrubbed in running hot water with a brush and green soap; the spaces under and around the nails are cleaned with a bit of soft wood; then about a tablespoonful of chlorinated lime with an equal amount of washing-soda is placed in the palm of the hand, and enough sterile water added to make a creamy mass. This is rubbed over the hands and forearms until granules are no longer felt, and is pushed under and around the nails by a piece of orange wood. The paste is then washed off with sterile water, and the sterilization is complete. This mixture removes fat, grease, and a part of the epiderm, and evolves nascent chlorine, which is an active germicide, and, being a gas, enters into the tissues to a greater degree than can a liquid. Menge envelops the hands in an aseptic coating. The hands are cleansed mechanically, the skin softened by soaking in sterile water, disinfected with an alcoholic solution of corrosive sublimate, then soaked for a time in seventy-per-cent alcohol, and dried with a sterile towel. A mixture of paraffin and xylol is then used to form an impermeable coating.

A most valuable paper by Kocher was read at the meeting of the American Surgical Association, Chicago, June 2, 1899. He considers the use of gloves during operation and gives his own method of preparing for operating. He believes that the results of the winter's work—225 cases without formation of an abscess or suppuration of the wound—are not to be attributed to the use of gloves, as they had the same good results in the clinic before they began the use of gloves. Sterilizing the hands repeatedly with strong germicides is dangerous to the health, therefore surgeons had better avoid touching any infective fluids or septic matter with their hands. "And here the question of gloves arises in a much more commanding form. Let us wear gloves before and between the time of our operations; wear cotton or leather gloves when we have to touch and examine dirty people in the out-patients' room; wear impermeable gloves whenever we touch an infected wound or open an abscess or make a vaginal or rectal examination. Surgeons are to wear gloves during professional activity, and should be allowed a time without wearing gloves only during their holidays. In doing so we are able to arrive at perfectly sufficient preparation of our hands for operations by the most simple means As to my own hands, during the whole winter I never used any chemical antiseptic before an operation. The preparation consisted exclusively in cleansing with soap and brush for fifteen minutes

at least under a stream of hot water, and then brushing with alcohol, eighty-five-per-cent, for five to ten minutes, till every particle of skin is thoroughly cleansed. I think it to be very important that we always should use brushes lying in sublimate solution, that cleansing with soap and hot water should be done under a stream of water and not in a basin, and that we should not bring our hands in water again after the „alcohol washing." The patient's skin in Kocher's clinic is cleansed with soap, hot water, alcohol, and ether. The cleaning with hot water and soap by the brush takes place the day before the operation, and the final preparation with alcohol and ether just before operating. The nails of the operator should be cut away as far as possible. Ligature material should be not only aseptic but antiseptic as well. Antiseptic silk is far preferable to catgut. In his operations large numbers of artery forceps are used and ligatures are not put on until the end, after the wound and the fingers have been carefully washed. Fresh gloves should be used for tying the threads, and this is the really useful method of employing gloves, cotton or silk answering this purpose just as well as gloves of rubber.

Kocher's conclusions regarding the hands of the operator are either:

1. Use sterilized rubber gloves for every operation when you wish to be quite independent as to the form of your nails, the touching of everything you like, and the liberty to wash or not to wash your hands, and when you can spend plenty of money. Put your covered hand from time to time in a strong antiseptic solution (best, two-per-cent sublimate) during a long operation, if you wish to be very careful.

2. Never wear gloves for operations; do what you like between the operations, but poison yourself every time before you operate by brushing and bathing your hands for ten minutes in a strong, hot sublimate solution after thorough washing and cleansing with hot water, soap, and alcohol for fifteen minutes. Repeat a short antiseptic ablution frequently during a long operation, when you wish to be very careful.

3. Go the golden middle way. Avoid touching with uncovered hands any infective or septic material *between* the operations or wash it carefully away at once; cut your nails as short as possible; brush your hands thoroughly with hot water, soap, and alcohol (85- to 95-per-cent), avoiding any poisonous disinfectant before you operate; and, if you wish to be very careful, put cotton, silk, or, best, rubber gloves on when you touch the threads for ligatures and sutures, and when you have to tear the tissues much and to rub your fingers in the depth of a wound.

But primary healing depends not on the hands alone, but on the preparation of the patient's skin, complete arrest of bleeding, exact closing of the wound, avoidance of fluid in cavities, and the use of *antiseptic* ligatures and sutures.

POINTS IN ANTISEPTIC AND OPERATIVE TECHNIQUE FROM PHILADELPHIA CLINICS.*

W. W. KEEN, M.D.

Our method of preparing the hands which has been in use for some time still gives satisfaction and is believed to make the hands as free from germs as is possible.

First the hands are thoroughly scrubbed in soap and water, after the nails have been cut, if needed. This is the most important part of the preparation. If I had the choice of soap and water, the lime and soda method we use, or potassium permanganate and oxalic acid—one of the three and no more—I should unhesitatingly choose the soap and water. After a scrubbing with this the soap and water is washed off with alcohol. Then a drachm or so of chlorinated lime and an equal amount of sodium carbonate is placed in the palm of one hand and moistened sufficiently to make a paste. This is rubbed thoroughly into the arms and hands, a bit of orange wood being used to introduce it around and under the nails. The hands and arms are then washed with hot sterile water and finally in bichloride solution.

I was fairly well pleased with the use of gloves last winter, but will try and do without them this winter. Kocher has fully demonstrated that the surgeon can do well without gloves. Doing without gloves is quite an item to the operator, both as regards convenience and expense.

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E. E. MONTGOMERY.

The great part in disinfecting the hands is the thorough use of soap and hot water. This should be chosen before all others if but one is to be employed. The tincture of green soap should be used and thorough scrubbing employed. After this the nails should be cleaned, and this followed by a second scrubbing with the soap and water. Then a solution of bichloride of mercury in alcohol, one-to-five-hundred, is employed. A cloth or pad wet with this is used to scrub each nail separately and carefully, as around the nails is the most difficult part to render sterile. After this the hands are washed in bichloride solution and finally in sterile water.

If the operator has recently had a septic case, he should wear rub-

*Reported from clinical lectures.

ber gloves. If he has a sore finger, at the root of the nail, he should not wear simply finger stalls, but full rubber gloves, for his own protection.

In closing an abdominal wound suture of the separate layers should be done to guard against the occurrence of ventral hernia. A continuous catgut suture of the peritoneum is first introduced; then interrupted silkworm-gut sutures are passed through the overlying tissues, these passing also through the projecting edges of the peritoneum between the suture introduced. Before the second or skin sutures are tied a continuous catgut suture is used to coaptate the edges of the aponeurosis or muscle sheath. The skin sutures are then tied, care being taken to not draw them tight enough to produce any great degree of tension. They may be left looser than when the other sutures are not used, and this of course favors healing and helps in the prevention of stitch abscesses.

The cut ends of the skin sutures are left three or four inches in length and a wet bichloride dressing applied over the wound and around the sutures while they are being held up. The object in leaving them this long is to have them act as a drainage if a small amount of oozing comes from the wound, and also to facilitate their removal without grasping them with instruments.

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J. B. DEAVER.

When operating the surgeon should not forget antisepsis, but should aim rather at asepsis. The hands are thoroughly scrubbed, then potassium permanganate and oxalic acid is used, this being followed by rinsings in alcohol, carbolic solution, and sterile water. Rubber gloves are used by Deaver, his assistant, and the nurses who handle the sponges and instruments and ligatures. These gloves are changed after each operation, the hands being also disinfected as in the beginning.

Only sterile water is used for wetting the sponges, washing the hands, for the instrument trays, etc., during the operation, in clean cases. For irrigating in septic cases, normal salt solution is used. Dressings of bichloride gauze are used in some cases; in others sterile only.

In removing drainage tubes from breast cases, etc., the surgeon should wear gloves, as during the operation, if all chances of infection are to be avoided so far as possible.

The incision in abdominal operations is made through muscle whenever possible. Separate sutures are used — continuous catgut for peritoneum and fascia, and interrupted silkworm-gut for the closure of the skin wound.

WOMEN WITH MULTIPLE CARDIAC LESIONS, COMPLICATED WITH SERIOUS INTRA-ABDOMINAL TROUBLE, POSSIBLY DUE TO PARACENTESIS—THE PARACENTESIS FOLLOWED BY A CHANGE IN THE RATIO OF WHITE CORPUSCLES TO RED.

BY THE LATE DR. WM. PEPPER, PHILADELPHIA.

We have presented to our notice this morning the case of a woman aged twenty-six, married, one child, and with a family history of rheumatism. She had the articular form of this trouble herself. This was followed by endocarditis, reducing her to the condition in which we see her at present. She is short of breath, her belly is swollen, and she presents an extreme degree of emaciation. She has been tapped ten times since May 1 of this year. The liquid which then escaped was of a clear yellowish color, closely resembling that of healthy urine; while now we see in this specimen, which is from the last tapping, a turbid red fluid of a specific gravity of 1010, in which is floating a pseudo-membranous matter, which will probably prove of importance in diagnosis. Serum which is drawn off in a tapping may at first be clear and of good color, but often on being allowed to stand, especially if in a high cylindrical vessel, it throws down a film like a beautiful veil. This is coagulated fibrin, but not necessarily of inflammatory origin; it is not always right to suspect a peritonitis; it may be due simply to venous obstruction. If, however, the liquor drawn off is turbid, bloody, and flocculent, then there is more reason to believe that there is something added to the simple venous congestion.

In tapping one case a number of years ago I noticed that the fluid running through the cannula, which at first was quite a good straw color, began to grow rather bloody, until it ran as pure blood as if I had opened some great vessel; it was anything but reassuring, especially as the case was one of an old colleague who had entrusted himself to me; and I was then quite a young man. It was rather astounding, for I felt sure that there could be no vessels within eight or ten inches within the point of tapping. However, the case recovered without apparent loss of blood or strength, and I regard it now as a rather excessive breaking of overcongested capillaries when the intra-abdominal pressure was removed.

Curiously enough, the only prominent place in which the dropsy appears in this case now is in the abdomen; the legs were dropsical at one time, but by treatment it has disappeared, leaving them cyanotic and erythematous. The dropsy has repeatedly recurred in the belly. The two facts—the appearance of the serum and the presence of ascites, with no dropsy elsewhere—lead us to believe that there is something

added to the heart trouble. On inspection we note the extreme emaciation of the patient. Cyanosis is most marked, running up the arm to the elbow. There is a throb in the cervical vessels, which may be due to the pulsation of the carotid artery, causing the jugular to rise and fall. Look out for this point in all your inspections, for it will make great difference whether the blood is dammed back from a weakened tricuspid valve, or is giving the pulsation from the carotid simply. There is probably a triple lesion, a mitral stenosis, an aortic thickening, and a tricuspid inefficiency. The current in the superficial abdominal vessels in the upper abdominal zone should run up to empty the blood into the subclavian vein, but we see by pressing the veins at different points that the current is in reality downwards, as if to relieve the congestion above. The liver does not extend below the margin of the ribs and runs up to about its accustomed limits above; from the extent of the cardiac lesion a much greater size might very reasonably be expected. The way to determine the exact margin of the liver is to use quick pushes rather than by slow, careful feeling. In abdominal dropsy in the female it is never safe to omit examination into the possibility of the existence of an ovarian tumor; although in this case there is nothing which points toward it, ovarian liquor being, as you know, dirty and viscid in character. On turning the patient on her side we find that the resonance which we noted in her inguinal region still remains; it is of that curious quality produced by the mixture of wind and water. This shows that the liquid is not free to move; hence it is not common ascites. We must now see if her pelvic cavity is encroached upon; this determination we will ask a gynecologist to make. If it is not ovarian, it can be one other thing—that is, chronic peritonitis of some sort, which has matted togther the bowels by bands of adhesions. There are three great causes of chronic peritonitis—syphilis, malignant growths, and tuberculosis. There is no evidence of pulmonary trouble, and tuberculous processes are rather rare with heart disease. She is entirely free from fever. She is almost too young for malignant disease, and there is no trace of specific trouble. Sometimes repeated tappings may set up a low grade of inflammation, and hence produce the chronic peritonitis, due either to unclean instruments or other causes, which it may be quite impossible to avoid.

At a subsequent date careful physical exploration showed no evidence of uterine or ovarian disease. The peritoneal cavity quickly filled, and she was tapped three times at intervals of three weeks. A paper read some time ago before the County Medical Society by Dr. Guiteras, the professor of pathology at the University of Pennsylvania, in which he stated that in four cases of abdominal dropsy he had

noted an increase in the number of white corpuscles in proportion to the red, following paracentesis, suggested the determination of the ratio in this case. The resident physician, who is making an exhaustive examination of this reported phenomenon, kindly furnishes the following report of this case: "The examination of the blood showed that the red and white corpuscles were normal in color and contour. The red blood-corpuscles were variable in size; some of them were quite large. Repeated observations before the last tapping gave the following results: 3,275,000 red corpuscles and 14,285 white corpuscles; immediately after tapping 3,425,000 red corpuscles and 35,000 white corpuscles. It is evident from the observations that the white corpuscles are present in increased quantities—namely, 20,715 more—immediately after the evacuation of the peritoneal effusion, while the red blood-corpuscles remained practically the same in number. The count of the white corpuscles was made with care, and repeated several times. Not less than 112 squares were enumerated before a decision as to the number of white corpuscles to the cubic millimeter was reached. It is as yet too early to deduce any conclusions from this apparent phenomenon, and I will make extensive observations in a large range of cases before attempting to reach any explanatory theory."

THE following testimony was recently given by a woman at the anniversary services of faith-cure believers, which was held at Mount Zion Sanctuary, in Chapel Avenue, Greenville, N. J.: "This man, when young, spilled some acid in his eyes and destroyed the sight of both. The physician removed his eyeballs and he was totally blind for many years. He was finally persuaded to pray for the restoration of his sight. Shortly afterward he felt something growing in the places where his eyeballs had been. New eyes were given to him, and to-day he can see as clearly as any person here."

ACCORDING to the *Medical Record*, it has been proposed to establish in Birmingham, England, an institute where a consultant's opinion can be obtained for 10s. 6d., or just half the regular rate. The medical men of the city have held a meeting and passed resolutions that, with the exception of the senior and most prominent consultants, all the others were willing to visit the poor in consultation for the same fee of half a guinea. This has had no effect upon the promoters of the scheme, however. They propose to pay two consultants, a physician and a surgeon, £500 a year each, and expect to make quite a handsome profit out of the undertaking.

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EDITED BY FREDERICK W. MANN, M.D.

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EDITORIAL ARTICLES.

THE USE OF ALCOHOL IN WAR.

The "Kaffirgram" from Ladysmith announcing that whiskey was selling at $25 a bottle was not only an indication of the low supply of certain luxuries in the besieged city, but was an assurance that alcohol is occupying a very different place in the rations of war to what it did years ago. That it had reached this price when necessary provisions were fairly plentiful indicated that it had not been provided in large quantities.

The waning estimation of the value of alcohol for general purposes is perhaps nowhere more admirably exemplified than in the records of the British army. In old days, when it was the fashion of our forefathers to drink to excess, the same practice prevailed in the services, and in the army and navy grog was an indispensable and permanent ration. A very different place is now assigned to alcohol in the conduct of modern warfare. No longer is "Dutch courage" the kind of courage thought desirable to attain. The modern general knows that hardships can be best borne and dangerous climates best encountered without the constant use of stimulants. This conviction has long been gaining ground. Even in the Indian mutiny Havelock's men performed the greatest feats of endurance on coffee alone as a beverage. To General Wolseley, the present commander-in-chief, may perhaps be particularly attributed the growing condemnation of the spirit ration. In the Red River expedition of 1870 Wolseley first discontinued the spirit ration, and it is recorded that no troops enjoyed better health than those engaged. The rum ration was discontinued in the Ashantee war of 1873, and was again prohibited in the Kaffir war of 1877–78. In the Soudan expedition all alcoholic liquors were prohibited, and the men engaged achieved fine physical condition, as regards health and endurance.

The needlessness of alcohol in every-day life is admirably illustrated by military experience, and there is little doubt that stimulants will never again be found in army equipment except for administration under medical control.

EDITORIAL NOTES.

French Fecundity.

Some fifteen years ago the French legislature decided that every family of seven children could designate one of its members who should recéive gratuitous secondary education in a State establishment. It was not estimated just how many millions of francs this would cost the State, but it appears that the demands this year have amounted to more than 250,000 Francs—that is to say, there are at this moment in France 250 families having at least seven living children. It may therefore be estimated that 250,000,000 francs at least has been and is being paid as a bounty for promoting fecundity. A recent inquirer considers that besides these 250 families having seven children, there are 322,000 having six, 972,000 having five, and 975,000 having four. It is therefore calculated that twenty per cent of families show five, fifteen show three, twenty-two show two, and twenty-four only one. It is calculated forty-six per cent of families have voluntarily no child, and one therefore finds that more than half the French families have no children. In certain parts of France unusual fecundity is shown, some showing an average of nine or ten annual births per 1000 inhabitants. In spite of this it must be considered that depopulation in France is one of the country's most pressing problems.

The Surgeon and the Sponge.

From Columbus, Ohio, comes the report of a case in which it is expected the surgeon's responsibility for the acts of his assistant will be judicially defined. A patient in whom an abdominal section had been made died from septicemia as a result of a sponge of absorbent gauze being left in the abdominal cavity. The surgeon asked the nurse in charge if the sponges had all been accounted for, and she affirmed they had. Did the surgeon do all that his responsibility in the proceedings demanded? There can be no doubt that the surgeon followed the usual rule. If the surgeon provides capable assistants, his responsibility for accidents must cease. He may be technically responsible for the anesthetic, but if any accident occurs his responsibility must cease on showing that he provided a competent anesthetist.

Sponge accidents, however, are not uncommon, and prudence will dictate that operators thoroughly explore cavities in which they may lurk, in addition to accepting the word of their assistants that all is well.

A New Method of General Anesthesia.

At a recent meeting of the Biological Society of France, M. Tuffier gave an experimental demonstration that an injection into the arachnoid is a practical and safe method of procuring surgical analgesia. With a patient who suffered severe pain in one of the extremities, and in whom no subcutaneous injection afforded relief, he administered fifteen grains of cocaine by intra-arachnoid injection. This gave complete relief for four hours. As a surgical analgesic he has been able to break up, without any pain, an ankylosis of the foot, to make a resection of the knee-joint, and to do vaginal hysterectomy. He is enabled by this means, while securing analgesia of the lower extremity, to preserve complete sensibility in the superior part of the body. Tactile sensibility is everywhere preserved. This matter is undoubtedly interesting, but it will require considerable demonstration to effect a belief that this method of procuring anesthesia can possibly be less dangerous than the employment of chloroform.

Cold in the Treatment of Disease.

The freedom of most parts of the Arctic region from dangerous microbic infections has suggested to an English journal the advisability of establishing a sanatorium at Spitzbergen. It is not apparent just what advantages might be possessed by this place over several others. It might, however, be a very desirable experiment to make, although it is doubtful if any experiences different to those already achieved at Davos Am Platz would eventuate.

The Bloodiest Game of the Century.

So far this season there have been reported eleven deaths and thirty other casualties incurred in the game of football. When it is considered that these battles only involve twenty-two in each engagement, the mortality is reaching the proportions of the bloodiest battle of the century.

ITEMS AND NOTES.

San Francisco is to have a new hospital.

There is no medical school in South Africa.

The plague is reported to have appeared at Cadiz.

An epileptic colony will soon be started in Virginia.

Several cases of plague have appeared at Kobi, Japan.

Quinine plantations have been started in Bolivia by the Germans.

A death from hydrophobia was reported in Chicago November 25.

Smallpox is reported to be epidemic in Kamarouska county, Quebec.

There are 500 English physicians in South Africa, and only a few of other nationalities.

The plague continues in Portugal, two or three deaths a day being reported at Oporto.

The death of the director of the Bacteriological Institute at Lisbon from plague is announced.

Kentucky University at Lexington has been closed on account of the outbreak of typhoid fever there.

Kerlich has been elected superintendent of the new institute for experimental therapeutics at Frankfort.

In Paris the phonograph is now being brought into use as a means of identification of criminals by the voice.

A woman at Mountain Top, Pennsylvania, recently gave birth to her twenty-fifth child, a strong and healthy boy.

Dr. Joseph Sailer, of Philadelphia, has been appointed assistant pathologist of the University of Pennsylvania Hospital.

A New York merchant who sold oleomargarine for butter was tried, convicted, and sentenced to pay a fine of $150.

Doltan Hall, the chemical laboratory of the Johns Hopkins University, was seriously damaged by fire December 4.

The death of Dr. William Ireland Wheeler, a former president of the Royal College of Surgeons in Ireland, is announced.

Smallpox is reported to have broken out at Cape Town, the disease having been brought by the refugees from the Transvaal.

The State Board of Health of Pennsylvania has requested the State to appropriate $5000 for the suppression of smallpox.

Late Vice-President Hobart's will leaves $5000 to the St. Joseph's Hospital, and a like sum to the General Hospital, Paterson, N. J.

Dr. R. Jorge, the Oporto physician and sanitarian, has been appointed chief of the National Board of Health of Portugal.

Dr. C. B. Burr, of Oak Grove, Michigan, has been elected an associate member of the Société Médico-Psychologique de Paris.

J. Pierpont Morgan, in addition to his original donation of $1,000,000, has given $250,000 to the New York Lying in Hospital.

Dr. George F. Butler has resigned his position as editor of the *Medical Standard* and will shortly establish a medical journal of his own.

More than three hundred physicians have applied to the civil service commission in Chicago for examination for medical inspectors of schools.

The druggists and dentists of Canada are now agitating for some form of Dominion registration for these two professions throughout the Dominion.

The University of Cincinnati, of which the Ohio Medical College is the medical department, has received from Mr. David Stenton the sum of $100,000.

Dr. Kuttner, of the University of Tübingen, has been sent by the Red Cross Society to the Transvaal to assist the Boers with their ambulance service.

On the basis of national figures for Great Britain for 1887-89, one out of twenty-one men, and one out of twelve women, die eventually of cancerous disease.

The French Jesuits who have charge of the medical colleges at Beyrout, Syria, are erecting additional buildings to accommodate the increasing number of students.

MEASURES have been taken to petition Congress to raise all the naval pharmacists to the rank of warrant officers after they have passed a satisfactory examination.

MUCH indignation has been aroused in England by the bad quality of the State supplies furnished by the contractors engaged to fit out the transports carrying troops to the Cape.

THE widow of Dr. Schraupert, the late medical superintendent of Moscow City Hospital, has had bestowed upon her a pension of 807 roubles by the municipal authorities of that city.

THE French Red Cross Society has given the Central Red Cross Society of Geneva a complete equipment of medical appliances, instruments, etc, sufficient for two field hospitals.

IN his report to the navy department Lieut.-Commander V. L. Cottman notes the existence of leprosy in the Island of Guam, and makes some suggestions regarding its eradication.

A SHORT time ago a young man died at St. Luke's Hospital, New York City, from blood poisoning said to have been produced by scratching a pimple on his face with his finger-nail.

THE German Chemical Society has had a gold medal struck in honor of Pettenkofer, on the occasion of the fiftieth year since the publication of his great work, Aequivalentzahlen der Radicale.

THE recent Italian Congress of International Medicine passed a resolution that the official participation of Italy in the International Medical Congress next year depended on the recognition of Italian as one of the official languages.

THE Jenner Society recently presented a gold medal to Dr. V. O. Hubert, of St. Petersburg, for his work upon vaccination and small-pox. Dr. Hubert is secretary of the Russian National Health Society, and in 1897 published a large and profusely illustrated volume upon the subject in question.

PERHAPS the largest patient ever received at Bellevue Hospital was a trombone player, thirty-four years of age, and weighing 400 pounds, who was taken there on September 2, suffering from hemiplegia. It required eight men to lift him from the ambulance, and in the ward to which he was taken two cots were lashed together and especially braced to sustain the man's weight.

THE Association of the Acting Assistant Surgeons, U. S. Army, was organized at a meeting held in the 7th Regiment armory, New

York City, on December 5. The main object of the association was to secure legislation from Congress looking to the carrying out of the promises when their services were contracted for.

A QUESTION has arisen as to the sanity of Lombroso, the criminologist, on account of an article of his in the *Pall Mall Gazette*, entitled "An Epidemic of Kissing in America." He tells of Hobson's 10,000 kisses, of their publicity, and of how he was at the time addressing "a crowd of specially *elite* persons." Lombroso states that Hobson began his career of kissing at Vassar College, etc., etc.

A PATIENT was exhibited at the recent German National Dental Congress whose entire upper jaw had been removed and replaced by an artificial contrivance, the work of Privat Docent Jessen, of Strasburg, and the dentist Hahl, with alveolar process and teeth, the two halves connected with springs. It was worn without inconvenience and enabled the patient to speak. Before it was applied articulation was impossible.

A GERMAN doctor has, according to the *Scientific American*, devised a plan for the massage of rheumatic joints. He takes the patient's hand and puts it in a deep glass which is two-thirds full of quicksilver. The mercury exerts an equal pressure on every portion of the fingers, and the pressure increases rapidly as the fingers sink further into it. The hand is alternately plunged and raised about twenty or thirty times at each treatment, and after a second visit there is a marked diminution of the swelling.

THE death is announced of Professor Tiemann, professor of chemistry in the University of Berlin and editor of the Proceedings of the German Chemical Society. He was an ardent research scholar, and his studies of the terpenes resulted in the establishment of an industry for the synthetic production of artificial flavoring matters and perfumes. It is said that the artificial violet perfume which Professor Tiemann succeeded in preparing synthetically is largely used for communicating odor to otherwise odorless flowers.

IN Le Mal Necessaire, a French novel, says an exchange, the life of a talented, successful, unscrupulous young Paris surgeon is sketched with remarkable technical fidelity. To supply his insatiable need for money, the young surgeon operates right and left, regardless of everything save the purse of his patients. He takes advantage of a young woman in a cataleptic condition, and when consulted by her parents a few months later diagnoses a tumor and operates. The chief interest in the story is the psychological study of his assistant, an honorable man, who learns the circumstances.

NEW PUBLICATIONS.

AMERICAN TEXT-BOOK OF SURGERY.

The approval bestowed by the profession upon former editions of this text-book, resulting in the sale of 29,000 copies, has stimulated the authors to a careful revision of this the third edition. The contributors are selected from the most eminent teachers of surgery in America. Among the new topics introduced are a full consideration of serum-therapy; leucocytosis; post-operative insanity; the use of dry heat at high temperatures; Kronlein's method of locating the cerebral fissures; Hoffa's and Lorenz's operations for congenital dislocations of the hip; Allis's researches on dislocations of the hip-joint; lumbar puncture; the forcible reposition of the spine in Pott's disease; the treatment of exophthalmic goitre; the surgery of typhoid fever; gastrectomy and other operations on the stomach; several new methods of operating upon the intestines; the use of Kelly's rectal specula; the surgery of the ureter; Schleich's infiltration method and the use of eucaine for local anesthesia; Krause's method of skin-grafting; the new methods of disinfecting the hands; the use of gloves, etc. A number of new illustrations and a colored plate of several specimens of appendicitis have been appended to the present edition. The work reflects great credit upon the authors and the publishers.

An American Text-book of Surgery for Practitioners and Students. By Phineas S. Conner, M.D., Frederic S. Dennis, M.D., William W. Keen, M.D., Charles B. Nancrede, M.D., Roswell Park, M.D., Lewis S. Pilcher, M.D., Nicholas Senn, M.D., Francis J. Shepherd, M.D., Lewis A. Stimson, M.D., J. Collins Warren, M.D., and J. William White, M.D. Edited by William W. Keen, M.D., LL.D., and J. William White, M.D., Ph.D. Third Edition. Thoroughly Revised. Philadelphia: W. B. Saunders, 1899.

TWENTIETH CENTURY PRACTICE OF MEDICINE.

The eighteenth volume of the Twentieth Century Practice of Medicine contains only three articles, but these are sufficiently encyclopedic in character to make the volume one of the most notable of the series yet issued. The first article is by Lang, of Vienna, on Acquired Syphilis, an exceedingly well written essay upon the subject. In its principal aspects it presents such a complete account of the disease that we must regret that the author did not feel justified in adding a few pages regarding the past history of this interesting malady. The article on Inherited Syphilis is by Jonathan Hutchinson. It is an example of that author's attractive and trenchant style. The article on Leprosy is contributed by P. A. Morrow, of New York, and is an exhaustive treatise upon the subject, thoroughly modern in tone, and clinical in spirit. Accepting as he does the bacillar origin of the disease, he is, of course, thoroughly committed to a belief in its contagious character. The present volume will be found an exceedingly valuable work, taken either alone or in conjunction with its predecessors.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Volume XVIII: Syphilis and Leprosy. New York: William Wood & Company, 1899.

PICK'S SURGERY.

The author of this manual of surgery is the well known surgeon of St. George's Hospital, London, and the present work is in substance the lectures on surgery which he has delivered at St. George's Hospital during the last fifteen years. The book has been mainly written for students and practitioners, and it will be found a useful work of refer-

ence, containing a concise and practical account of the causes of surgical injuries and diseases, the signs by which they may be recognized, and the appropriate treatment to be adopted for their cure. The work is the outcome of a very extensive experience, and will be appreciated on this side of the Atlantic as well as in the author's own country. It is a very complete manual of the subject and comprises more than 1100 pages of closely written text copiously illustrated. American surgeons will peruse the volume with a great deal of interest, for the discovery of different methods and procedures to those which they ordinarily employ. The manual is a fine example of careful and complete book-making.

Surgery. A Treatise for Students and Practitioners. By Thomas Pickering Pick, Consulting Surgeon to St. George's Hospital. London, New York, and Bombay: Longmans, Green & Co., 1899.

ANDERS'S PRACTICE OF MEDICINE.

This work introduces the student to the present state of our knowledge of the practice of medicine in general. The first edition was exhausted in less than a year, and in the present issue many important alterations are found. The manner in which the work has been written will assist the student in the acquisition of a proper classification of facts of disease. The leading symptoms have been uniformly italicized, a modification that cannot fail to prove helpful to the medical student. A preliminary chapter in the section on nervous diseases deals with the subject of localization and the various methods of investigating nervous affections. New illustrations have been added of microscopic preparations, designed to emphasize the fact that the microscope is often necessary for absolute diagnosis. The changes and additions in the volume have much enhanced its value, and it can be safely predicted that the work will enjoy a generous measure of popularity.

A Text-book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D. Illustrated. Third Edition, Revised. Philadelphia: W. B. Saunders, 1899.

PRINCIPLES OF SURGERY.

The Principles of Surgery form the subject-matter of thirty-two lectures delivered to his classes by Professor Nancrede. Their author has considered that similar works dealing with the principles of surgery have been marred in usefulness by being made too comprehensive, and as modern specialism has provided for specific instruction in pathology, bacteriology, etc., the principles of surgery need not of necessity involve a useless repetition of those studies. The work is a thoroughly readable one and has been very admirably illustrated with drawings by the author's skilful assistant, Dr. Spitzley. The work will be popular with students, and will doubtless take the place with them of some of the larger treatises upon the subject.

Lectures upon the Principles of Surgery Delivered at the University of Michigan. By Chas. B. Nancrede, A.M., M.D., LL.D. With an Appendix Containing a Résumé of the Principal Views Held Concerning Inflammation, by Wm. A. Spitzley, A.B., M.D. Illustrated. Philadelphia: W. B. Saunders, 1899.

ESSENTIALS OF PHYSICAL DIAGNOSIS.

This is the third edition of Dr. Corwin's little book, first published under the title "Outline of Physical Diagnosis of the Thorax." It presents the subject of physical diagnosis in its salient points. It is well designed to meet the wants of the medical student.

Essentials of Physical Diagnosis of the Thorax. By Arthur M. Corwin, A.M., M.D., etc. Third Edition, Revised and Enlarged. Philadelphia: W. B. Saunders, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

A New Clavicle Splint.

H. L. Taylor (*Pediatrics*, Dec. 1, 1899) describes a new clavicle splint which he says consists of two convex, pear-shaped, hard-rubber pads, fitting into the depression in front of the shoulders, and joined by a rigid adjustable bar, curved forward so as not to touch the chest. Each pad carries a buckle above and a strap below. The back piece, to which the front piece is buckled, consists of a stiff piece of sole leather, lined with chamois and a layer of padding, and provided with straps at the upper corners and buckles at the lower. The back pad is large enough to overlap the posterior borders of the scapulæ an inch or more, and to reach from the root of the neck to well below the axilla. When applied to a case of fractured clavicle the splint is set as wide as possible and buckled snugly into place. This forces the shoulders back by a double action, the backward pressure on the humerus of the pads in front, and the forward pressure of the large pad behind, upon the inner margins of the scapula. After the apparatus is settled into place the curved bar in front can always be lengthened an inch or more, and a wider splint is invariably required than the surgeon expects, unless he has had previous experience. When properly applied the arm can be used, at least during most of the treatment; and it is the only splint known to the writer which permits the use of the arm. A sling is necessary only for a few days, and sometimes not at all. The apparatus acts as an independent shoulder girdle, assuming the function of the clavicle.

The writer has treated a number of cases of fracture and dislocation of the clavicle with this apparatus during the last eighteen years, and has always found that it held the fragments in better position, and was more comfortable for the patient than any other dressing.

A Plea for the Further Use of Carbolic Acid.

Frederick J. Adams (*New York Medical Journal*, Nov. 25, 1899) says that one of the best of all bactericides is carbolic acid, which has probably been used as extensively as any of our antiseptics. The only drawback to its employment has been that when used in strong solutions it has destroyed the tissue. His method for the past eight months has been to use the crystals, liquefying them and applying the

fluid to the surface with a camel's-hair brush as soon as the surface appears white. Alcohol is applied in copious quantities, and the work is over.

The writer has been using this treatment in all cases of cellulitis, felons, about ulcers with wide-spread exudate, carbuncles, erysipelas, and, in short, any and all inflammatory conditions where streptococci and staphylococci are present. His latest experiment was with a case of gonorrheal vaginitis, where the vagina in its entire depth was exceedingly swollen and the labia were nearly impassable. He saturated a tampon with pure carbolic acid, inserted it into the vagina, let it remain thirty seconds, withdrew it, and douched the parts with one quart of alcohol. The labia had been treated similarly previously. The following day the discharge was meager, and the swelling and inflamed area had subsided. A second treatment effected a complete cure. In no case did he have to make a third application of the acid.

Appendicitis.

The statistics of operations for appendicitis, says M. H. Richardson (*American Journal of the Medical Sciences*, December, 1899), are misleading. The mortality after operations in acute cases could be enormously reduced by operating upon all the cases as soon as the diagnosis is made, because practically all the mild cases will recover, not as many, however, as will recover after an operation in the period of health, for it is unreasonable to conclude that operations performed under conditions of even slight sepsis are as successful as those under none at all. The writer says that in those cases that he has seen in which the patient was profoundly septic with general peritonitis, all have died, whoever the operator or whatever his method, and he believes that there is only a small mortality in cases of acute appendicitis upon which an early operation is performed. The rule that needs to be constantly repeated is the one that calls for the surgeon early in the disease. It cannot be repeated too often. The rule that requires an invariable course of procedure in appendicitis without regard to the special aspects of the case, to the constitutional peculiarities of the patient, to his surroundings, to the fitness and experience of the operator, is, according to Dr. Richardson, a rule which is justified by neither facts, theories, nor arguments.

The Management of Surgical Injuries to the Ureters.

Beverly MacMonagle (*American Journal of the Medical Sciences*, December, 1899) says that surgical injuries to the ureters during extensive operations on the pelvic and abdominal viscera are com-

paratively frequent, and are found to occur most often during vaginal hysterectomies. These injuries can often be prevented by especial care, both before and during the operation. In uretero-vaginal fistula great care must be taken to have the urine aseptic before undertaking an operation for repair. In uretero-vaginal fistula repair through the vagina should be first tried. Failing in this, extraperitoneal implantation into the bladder is to be preferred. When injuries occur during abdominal operations, immediate repair by anastomosis or implantation should be undertaken. If the condition of the patient is low, implantation on the skin should be done with a view to future operation. When anastomosis or bladder implantation cannot be accomplished, implantation in the other ureter or bowel is preferable to implantation on the skin. Tying the end of the ureter, with a view to atrophy of the kidney, is not advisable. Nephrectomy should only be practiced as a last resort. The results of the different methods of uretero-anastomosis and bladder implantation have been about equally successful.

The Differential Diagnosis Between Chronic Joint Disease and a Traumatic Neurosis.

Reginald H. Sayre (*Medical Record*, Dec. 4, 1899) says that from numerous cases which have come under his observation he would say that in making a differential diagnosis between chronic joint disease and a traumatic neurosis the following points are chiefly to be noted:

1. A neurosis is apt to follow injury sooner than is disease of a joint.

2. The temperature is usually subnormal in a neurosis and elevated in inflammation of a joint.

3. The local temperature is usually much lower in case of a neurosis than in disease of a joint.

4. Atrophy progresses more rapidly after injury to a nerve.

5. True muscular spasm is not present except in joint disease. It may be simulated, however.

6. True night cries are pathognomonic of joint disease.

7. The appearance of the patient, if indicating a disordered nervous system, may aid in the diagnosis.

Ivory Intestinal Button.

Sultan (*Arch. f. Klin. Chir.*, 59 Band, Heft 4) has constructed out of ivory an absorbable intestinal button which is closed by two metal shells according to the method adopted by Murphy. The elastic springiness is obtained through a rim of thick rubber at the ends of

the button. The ivory head is absorbed slower than the button of Frank, and it is only one-half as heavy as the Murphy button. After the absorption of the ivory the metal parts, even if they should fall into the stomach, could more easily pass through the seat of union than if the size of the opening only corresponded to the head of the button. The buttons are preserved in 70- to 80-per-cent alcohol, and when needed for operation on the bowel are provided with two rubber rings, and if needed for stomach operations are enclosed in a rubber covering and one rubber ring.

Gonorrheal Rheumatism.

Eichhorst (*Deutsche Med. Wochenschr.*, No. 42, 1899) reports a patient who after having had the disease for some time noticed pain in the outer part of the thigh. Objectively there was a spindle-like hardness whose seat was in the tenser fascia latæ. The infiltrate became in time nodular. According to current literature the muscle affections may occur in acute as well as chronic gonorrhea. It has been noticed up to this time only in men, and only in the muscles of the lower extremities. The writer suggests that this affection be named gonorrheal sclerotic muscle inflammation.

MEDICINE.

Sudden Death from Pulmonary Embolism Following Injuries or Operations in the Pelvic Region.

George P. Biggs (*New York Medical Journal*, Nov. 25, 1899) says that sudden death from pulmonary embolism is often so entirely unexpected owing to absence of premonitory signs or symptoms that it is important to know the conditions which may precede such a complication. He draws the following conclusions from the study of a number of cases:

1. The emboli are usually in the shape of cylinders, a little smaller than the lumen of the vein in which they form. Such cylinders often become folded several times upon themselves as they are forced into the branches of the pulmonary artery.

2. The thrombi formed in veins are chiefly of the red variety, though occasionally they are mixed. They may be quite firm and slightly stratified, though at times, to the untrained eye, they differ but little from post-mortem coagula.

3. Once started, thrombi in the veins tend to grow rather rapidly in the direction of the blood current.

4. At best the thrombi are but loosely attached to the wall of the vein, and may separate completely, leaving no distinct mark to indicate the area of attachment, as was the condition in two of the cases reported.

5. A long, cylindrical thrombus may have a very small base of attachment to one side of a vein, while the remainder of the thrombus floats free in the blood. This explains the absence of symptoms of venous obstruction.

6. While infection may sometimes play an important part in the causation of these thrombi, such does not usually appear to be the case. It seems probable that simple extension of thrombi formed in smaller veins, which were damaged at the time of operation or injury, or by subsequent inflammation, will explain the occurrence of thrombi in the large neighboring veins. Slowness of venous circulation naturally favors this process.

Some Observations on Periodical Inebriety.

P. C. Remondino (*Southern California Practitioner*, November, 1899) says this disease is a secondary condition due to some physical or psychic effect in the affected individual, and that a radical change of occupation, climate, or residence will often remove the cause and restore the patient to the normal. The periodicity may at times be due to a diathetic condition analogous to that upon which is grafted gout or rheumatism, and in the majority of these cases there is a tendency to self-limitation of the disease at certain ages. Any physical condition that tends to disturb the equanimity of the nervous system may be a failure for this form of inebriety. There exists a strong racial proclivity to this form of the disease which involves the offsprings of light and ruddy-haired and blue-eyed races. American climates, owing to their greater dangers and variability and other tendencies to intensify most nervous diseases, favor the development of the disease where a predisposing cause already exists, and it is useless to attempt a moral treatment with these cases to the neglect of the physical or environing causes upon which the condition depends for its existence. Occupations subjecting the afflicted one to great nervous or mental strain or shock should be carefully avoided.

The Prophylaxis of Enteric Fever.

At the Kief Medical Society Professor Vysokovitch (*The Lancet*, Dec. 2, 1899) recently read a communication upon the prophylactic treatment of enteric fever. The observations upon which the paper

was based were made on troops of a Bessarabian regiment quartered in Kief. In September, 1898, 235 of the men were inoculated with the prophylactic, the men chosen being those garrisoned in the low-lying parts of the town near the river, where typhoid fever is usually most prevalent. The other half of the regiment were not inoculated. The inoculation was always followed by a more or less severe reaction, accompanied by giddiness, headache, some rise of temperature, and acceleration of pulse and respiration, and some pain in the site of inoculation. Between September 14 (26th), 1898, and June 29 (July 11), 1899, eight cases of enteric fever had occurred among the men who had not been inoculated, while there was not a single case among those who had been, although the latter were, as stated, quartered in a part of the town much more exposed to the infection of typhoid fever than the former.

A Summary of the Pathological Changes in Paralysis Agitans.

H. C. Gordinier (*Journal of the American Medical Sciences*, December, 1899) says of the pathology of paralysis agitans that there is first of all in the spinal cord an occlusion with dilatation of the central canal, and in all cases there is found a general increase of the neuroglia elements throughout the entire extent of the cord. Among the most characteristic changes in this disease are those observed in the vascular system. There is an enormous increase in the number of blood-vessels of both the gray and white matter through the cord. Perivascular sclerosis is observed about the blood-vessels of the white matter, particularly associated with the vessels of the lateral and posterior column. The nerve roots are found slightly degenerated in the majority of cases. The changes in the medulla and pons, although similar in character, are much less extensive than those found in the spinal cord. In the cerebellum there is found to be granular degeneration of the cells of the corpora dentati and folia of the cerebellum. There is little or no change as a rule in the cerebrum.

The Open-air Treatment of Phthisis.

E. H. Thomas (*Indian Medical Record*, Nov. 8, 1899), in an article upon this disease and the modern methods of its treatment, says: "In their report on the open-air treatment of 183 cases of phthisis, the committee of the North London Hospital for Consumptives at Hampstead says that from January, 1899, to July they did not close a single door or window of the "open-air ward" where these 183 cases were being treated, and the general conclusion drawn was that all the patients had benefited considerably; 43.7 per cent were so much

improved that a large number of them showed no signs of lung trouble when they left the hospital. In 32.3 per cent there was distinct improvement with increase of weight, diminution of fever, and marked signs of a decrease of the active mischief in the lungs. Slight general improvement with diminution of fever was noted in 7.6 per cent, while in 4.3 per cent there was no improvement, and 3.9 per cent died."

Collateral Considerations Relating to Appendicitis.

Thomas W. Huntington (*Occidental Medical Times*, Nov. 15, 1899) draws the following conclusions from his observations:

1. That obscure gastric or enteric symptoms, such as habitual constipation and occasional abdominal pains, either localized or fugitive, should be given careful consideration before disease of the appendix can be excluded.

2. That a diseased appendix is a serious menace to the patient aside from the possibility of ultimate explosion and infection.

3. That early operation in chronic appendicitis should be as strongly urged in the mild as in the more formidable cases.

4. That whenever the presence of adhesions has been detected during operation, thorough exploration of the general cavity should be made to avoid the necessity of a secondary operation for their relief.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,

Microscopist to Harper Hospital, Detroit.

The Relation of Leucocytosis to Appendicitis.

R. B. Greenough (*American Journal of the Medical Sciences*, December, 1899) draws the following conclusions in regard to the relation of leucocytosis to appendicitis:

1. Leucocytosis may be considered to be a fairly constant symptom of appendicitis.

2. The presence or absence of leucocytosis, or the degree of leucocytosis, without other data, is not sufficient to determine the local condition of the appendix and its surroundings.

3. In a series of cases the degree of leucocytosis corresponds roughly with the degree of temperature, but in individual cases great variations are found.

4. The degree of leucocytosis, when considered in connection with

the duration of the attack, is of considerable assistance in the diagnosis of the local condition.

5. A high leucocytosis (above 20,000) on the first or second day of disease suggests general peritonitis.

6. A low blood-count (below 10,000) after the first week, if accompanied by severe symptoms, indicates general peritonitis, and is of grave prognostic significance; but if accompanied by mild symptoms it denotes a mild catarrhal process or well walled-off abscess which has become subacute in character.

7. A high leucocytosis (above 20,000) after the first week or ten days may be taken to indicate a local abscess.

A Rare Bowel Parasite.

Csokov (*Wien. Klin. Woch.*, No. 42, 1899) showed before the Vienna Society of Physicians twenty-four examples of a rare, nearly forgotten bowel parasite, viz., fly larvæ, from the stool of a patient. They are brown, round formed bodies, larvæ of the so-called *Luster Fliegen* Now and then it occurs that the eggs of this species of fly are found in the intestinal tract of man in large quantities, which cause the disturbances of indigestion, diarrhea, and vomiting. They have also been found in the urine, the urethra, and once in the external organs of hearing of a child.

THERAPEUTICS.

Dry Heat of High Degree as a Therapeutic Agent.

C. E. Skinner (*New York Medical Journal*, Dec. 9, 1899), in an article on hot air as a therapeutic agent, says that hot air is a pain-relieving agent of unequaled value in those conditions where its application is indicated and possible, because of its very constant effectiveness, rapidity of action, and the absolute absence of deleterious after-effects. In rheumatism, at least, its action is so profound in connection with judiciously chosen drugs that it may almost claim a positive curative power of its own, and may certainly be said to be the most powerful contributing agent we know of. Many cases cannot be cured by drugs without it, and in any case the victory over the ailment is much hastened and the victim maintained in comfort during the attack. On the other hand, we must remember that it appears to be rarely if ever capable of overcoming the disease without the aid of drugs. It is capable of stimulating tissue repair to a remarkable degree, as is demonstrated by its effect upon sprains and intractable

varicose ulcers. It is capable of influencing most happily septic inflammations of serous membranes, as shown by its action in peritonitis and pleurisy. It will many times at least give us the power of economizing nervous energy by relieving pain and other more or less dangerous conditions in pneumonia, thereby enabling us to refrain from sedatives and cardiac stimulation, and the nervous energy we may thus save for the patient will sometimes be sufficient to tide him over a crisis by which we would otherwise be overwhelmed.

Serum Treatment for Cancer.

Dr. P. J. McCourt, of New York (*Journal of the American Medical Association*, Dec. 9, 1899), has been engaged for some years past in studying the effect of treating cancer by different varieties of serum. He claims to be working along new lines, and certainly it would appear so to most persons listening to his description of the method. He says he obtains the primary serum from typical cases of rapidly recurrent carcinoma, the virus being collected from the ulcerated surface under proper precautions. It is then mixed with a perfectly pure vegetable glycerin, and subjected to a series of triturations and repeated subdivisions, whereby, he asserts, the toxins become converted into antitoxins. He does not employ the subcutaneous method, but advises that the serum be given by the mouth, two or three times a day, and continued for a long time. Dr. McCourt recently exhibited his serum at the close of one of the section meetings of the New York Academy of Medicine. He stated that while considerable clinical material had been kindly placed at his disposal by a number of the hospitals treating cancer cases, the present communication was strictly a preliminary one, and he could not speak of the results obtained with the serum further than to state that it had been found to relieve pain, improve the general health, and retard the progress of the cancerous growth.

The Value of Urotropin in Certain Forms of Genito-urinary Diseases.

J. M. Thompson (*Boston Medical and Surgical Journal*, Nov. 16, 1899), in an article on urotropin, draws the following conclusions as to its efficacy in certain genito-urinary diseases: (1) A urinary sterilizer, antiseptic, and acidifier, prompt and reliable in action, moderate in dose, which, if adhered to, renders it both non-toxic and non-irritating to all parts of the animal economy. (2) By virtue of its peculiar affinity for the urine, into which it passes unchanged, and where it parts with formaldehyde, it is apparent that its action in

genito-urinary lesions is likely to be complete and certain. (3) Its decisive and lasting effect, and especially its comparative singleness of action—which last is a most desirable property—should give it a place in the list of medicinal specifics. (4) From observations reported thus far, urotropin has appeared to be most frequently indicated in chronic disease, in which it produces exceptionally good results. (5) In the writer's personal experience the diuretic action of the drug was not marked enough to render it deserving of the claim of such virtue.

Scarlatinal Nephritis.

Wertheimber (71 Versammlung Deutscher Naturf. und Aerzte, Section of Pediatrics; *Berl. Klin. Woch.*, Oct. 23, p. 951, 1899), touching the treatment of scarlatinal nephritis, recommends the systematic injection of weak physiological saline solution in the bowels, the beneficial results of which he discovered accidentally, and which he now considers a valuable adjunct in the treatment of these cases. Results of such intestinal irrigations are most remarkable in cases in which it becomes necessary to stimulate renal activity—*i.e.*, to overcome anuria or threatening uremic complications. The efficacy of these injections he attributes for the most part, but not entirely, to the diuretic influence of the solution.

A Study of Codeine and its Salts.

George J. Lochboehler (*Journal of the American Medical Association*, Dec. 2, 1899) says that codeine is one of the most valuable drugs as a sedative in the various forms of cough. It is an excellent anodyne in the pains of pelvic and abdominal origin where morphine is contraindicated, and where the intestinal functions should not be deranged. It is the best remedy in the medicinal treatment of diabetes mellitus. The drug should be administered in the form of a sulphate for internal use, and as a phosphate hypodermically. Poisonous doses produce great restlessness, intense irritation of the entire body, spasms of the muscular system, and generally dilatation of the pupils. No fatal case of codeine poisoning is recorded.

A Cathartic for Hypodermic Use.

In a study on the physiology and pharmacology of the caffeine group, George Cohn (*Berl. Klin. Woch.*, No. 40, p. 885) takes up chloral caffeine, a chemical combination of caffeine with chloral hydrate, easily prepared by gradually mixing a solution of 300 parts of chloral hydrate in 300 parts of hot water with 380 parts of caffeine.

The compound separates in thick scales, which can be crystallized out of a watery solution at 30°. Chloral caffeine is easily decomposed. As a diuretic it has afforded but indifferent results, but in obstinate constipation it proves a cathartic of decided value. Two to four decigrammes in watery solution injected hypodermically, and repeated if necessary within two hours, is followed shortly by the voiding of soft mushy stools. Practically painless, the injection produces at most a slight burning, which endures only from one to three hours. Chloral caffeine also relieves the pain and swelling incident upon rheumatic arthritis.

Butter in the Constipation of Bottle-fed Children.

Dorfler (*Munch. Med. Woch.*, July 18, 1899), at a meeting of the Oberpfabzische Kreis-Aerztetag, referring to the constipation of infants, especially of those fed with the bottle, attributes the trouble to an excess of water in too much milk. The water being mostly eliminated through the kidneys, solid constituents in the milk condense into compact fecal masses, so that we have on one side excessive micturition, and on the other persistent constipation, with the occasional voiding of hardened feces of almost petrous consistence. Dorfler believes that the exhibition of fresh, sweet butter will effectually obviate this evil, and recommends the use of teaspoonful doses two to three times a day for children less than three months old, the dose increasing with the age of the patient up to a half or whole tablespoonful of butter at a time.

Viper Poison, Peptone, and Extract of Leeches as Coagulants.

Phisalix, of Paris (*Progrès Médical*, Oct. 28, 1899), has been making some further researches on the action of viper poison, peptone, and extract of leeches on the coagulation of the blood. He found that viper poison, which destroys the coagulability of the blood in dogs, does not afford any immunity against the coagulating action of peptone, and, conversely, injections of peptone do not inhibit the coagulating powers of the venom. This remark also applies to extract of leeches. He infers from these facts that the subjects in question do not influence the coagulation of the blood in the same mechanism.

Tetanus Treated with Antitoxin.

Holsti (*Zeitschr. f. Klin. Med.*, Band 37, Heft 5 and 6) reports 171 cases of tetanus treated with antitoxin; of these 97 recovered, and 74 died. The death-rate of those treated without serum is reported to be

from forty to forty-five per cent. It must be admitted, says Holsti, that the serum treatment of tetanus up to the present time shows no favorable results.

Mulberry Leaves as a Diuretic.

The leaves of the mulberry tree, which have long since been used by the Siberian peasantry for the treatment of urinary disturbances, have lately been recommended as an efficient diuretic; 2.5 grammes is steeped from eight to ten hours in a pint of water, of which the patient drinks one-half in the morning and the rest at bedtime.—*Berl. Klin. Woch.*

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Concerning the Etiology of Ozena.

Rundstrom (*Internationales Centralblatt für Laryngologie*, etc., vol. xv, No. 5, 1899), of Stockholm, has published some interesting observations on the subject. In the beginning of his article he gives a review of the ideas that have been expressed concerning the character of ozena since the time of Celsus. He reports in detail twenty-four cases of ozena as a class (Series A), and further reports fifteen cases of chronic purulent rhinitis (Series B). He found that in all ozena cases the secretion contains Friedländer's capsule bacillus. The bacillus was carefully isolated and showed as follows:

1. The appearance of the cultures (on agar-agar as well as gelatin plates) is similar to that of the pneumobacillus.

2. The ozena bacillus grows the same as the pneumobacillus in gelatin stab cultures.

3. It exhibits the same morphological characters and the same size, and stains the same with Gram's method.

4. It shows the same pathogenic peculiarities (kills white mice, but not puppies and guinea-pigs).

5. It does not coagulate milk.

6. In media containing sugar it develops gas.

In other words, this capsule bacillus is in no way distinguished from the bacillus of Friedländer, a conclusion which Loewenberg, Avel, and Marano have contended. This capsule bacillus is not found exclusively among ozena patients, since the author has discovered it very frequently in various other cases of fetid rhinitis (Series B). From his thorough clinical observations the author does not agree with the opinion expressed by Stoerk that hereditary syphilis plays any etiological rôle in ozena.

The Effect of Certain Occupations upon the Pharynx.

S. Oppenheimer (*Medical Record*, Dec. 16, 1899), in concluding an article upon this subject, says:

The pharyngeal mucosa of the mill-hand under twenty years of age is more susceptible to unfavorable influences than is that of the individual over this age.

The inhalation of dust, fibers, and chemical agents are the factors of most importance.

The majority of industrial workers are affected with pharyngeal disorders, dependent to a certain extent upon their occupation.

In those already affected with pharyngitis before assuming these occupations, the morbid changes are augmented by the work.

The primary pharyngeal changes are those of acute congestion and inflammation. Chronic changes are the ultimate result.

The pharyngitis produced in part or whole by the occupation does not differ in any respect from the ordinary forms.

Provided the nasal chambers be in approximately normal condition, pharyngeal affections are much less liable to occur than otherwise.

Hygienic measures applied to the environment of the worker are of vast benefit as regards the improvement of his general condition, and therefore of the upper respiratory tract.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Strong Sublimate Solutions in Eye Therapy.

Dr. Emil Guttmann (*Deutsche Med. Woch.*, No. 44, 1899), after a very considerable experience in Professor Magnus's eye clinic in Breslau with strong solutions of bichloride of mercury in the treatment of external ocular affections, recommends as strong a solution as 3 to 1000, and the instillations to be made by the surgeon himself, once a day, of six to ten drops on the inferior conjunctiva, avoiding the cornea as much as possible. He claims brilliant results in treating cases of severe mucopurulent conjunctivitis—the mild forms do not require such energetic treatment. It is especially effective in trachoma and in pannus trachomatosus, but treatment must be continued for some time to insure complete cures. In chronic dacrocystitis it often stops entirely the blennorrhea, and reduces the parts so that probing can be dispensed with. It is best in these cases for the

patient to lie in a horizontal position, after the application of the sublimate solution, and to close and open the eyelids so as to force the remedy into the lacrimal sac. Even in those cases which demand the use of a probe this treatment will hurry their cure, and do away with the necessity of the use of the lacrimal syringe. The author has never remarked, in any one of the thousands of cases subjected to this treatment, any signs of mercurial poisoning.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH., Attending Neurologist to Harper Hospital.

A Study of Delirium.

In the *New York Medical Journal* of July 22, 1899, William Hirsch presents a scholarly consideration of the condition known as delirium, which he characterizes as "a psychical state characterized by an abolition of self-consciousness, by an incoherence in the chain of conceptions, and by the appearance of symptoms of sensory and motor irritation." The incoherence of conceptions is evidenced by the disconnected and confused speech, the abolition of self-consciousness by inability to recognize surroundings, as also amnesia. Transitions from delirium to other allied conditions occur.

The incoherence of conceptions is due to partial suspension of the power of association, and the varied hallucinations to an interruption of cortical activity. The delirious patient receives no orderly impressions; he is, unlike the maniacal patient, unconscious of his acts, and during convalescence there is either total amnesia as to the attack or the memory is as a disturbed dream.

Agitated confusion may be confounded with delirium, but the origin of the attack is to be considered, and it is possible to demonstrate the melancholic state preceding the former condition.

In a state of raptus melancholicus mothers murder their children, or husbands their wives, but such inexorable impulses are not common to delirium. Confusional dementia and delirium will rarely be confounded.

Delirium appears most frequently in febrile states, and there is a common tendency to call all mental disturbances here arising delirium —a tendency at once unwise and injudicious, for maniacal conditions and acute illusions appear quite as frequently. A true delirium arises most often in collapse, and muttering delirium often accompanies sudden decline.

The acute infectious diseases, both acute and chronic toxic states, may be productive of delirium, and in sudden onset careful investiga-

tion and previous history may be helpful in throwing light, as acute delirium without observed prodromata may develop in typhoid, erysipelatous, and acute rheumatic states. Examination of the urine should never be neglected. To lesson motor restlessness and so preserve the strength is the prime indication. Venesection is unsparingly condemned.

He concludes by saying that delirium is an independent psychopathic condition, not forming a *morbus sui generis*, but occurring in the course of many mental diseases.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Rashes in the Antitoxin Treatment of Diphtheria.

In a clinical lecture Dr. Washbourn (*British Journal of Dermatology*, October, 1899) remarks that the rashes, as a rule, are erythematous or urticarial, occasionally scarlatiniform or morbilliform; very rarely purpuric hemorrhages in the skin have been noticed. The rash affects the body generally, but especially the extensor surfaces of the limbs. It occurs usually on the eighth day, but it may appear immediately, or as late as the thirty-first day. Dr. Washbourn points out that certain specimens of serum produce rashes and joint pains much more frequently than others. It is found that if the serum during preparation is allowed to remain very long in contact with the clot, it is more toxic to animals and more liable to produce pyrexia. It appears that this pyrexial effect can be prevented by heating the serum to 60° C., and that it may be possible to deprive the serum in future of noxious properties which from time to time give rise to the untoward results following its injection.

Vaccination in Smallpox in the Suppurating Stage.

In the *Meditzinskoie Obozrenie*, 1899 (*British Journal of Dermatology*, November, 1899), Kotovcktchikov states that he obtained very encouraging results from repeated vaccination in three severe cases of smallpox. In one the vaccinations were commenced a few hours before the appearance of the eruption; in the other two after the eruption had appeared. In all three vaccination was repeated twice a day, with good results; frequently the papules did not suppurate, and when they did they dried up more rapidly. He also observed four other cases of less severity, which he treated in the same way. The author concludes, first, that vaccination repeated regularly for four or five

days successively is a powerful therapeutic measure in the early stages of smallpox; secondly, that the evolution of the eruption is favorably influenced in severe cases; thirdly, he would not hesitate to begin the repeated vaccination even on the third day after the appearance of the eruption, with good results, he thinks.

Rashes Noted in 215 Cases of Enteric Fever.

In the *British Medical Journal* of July 8, 1899, Wm. C. Bosanquet notes that in 215 cases of enteric fever the typical rash was present in 146 instances (sixty-eight per cent). Erythematous, morbilliform rashes were noted in 18 cases; in one wheals; in one woman spots with central vesicles; in one child bullæ over the great trochanters. They were noted during all periods of the disease, even during convalescence, and were followed by desquamation. In one fatal case a petechial eruption was noted; also in one other case.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Chronic Inflammation of the Uterine Adnexa.

Stratz (*Munchener Med. Woch.*, Oct. 24, 1899, p. 1441) contends that conservative treatment promises the best results in cases of chronic inflammation of the uterine adnexa, and lays particular stress upon hot-water injections. In order to insure the use of higher temperatures he recommends his hard-rubber speculum, which allows of intravaginal irrigations without fear of scalding the external genitalia. To secure the best results, however, clinical treatment should be preferred to polyclinical (the patient should be kept in bed). Injections are to be daily made with six to seven liters (1½ to 2 gallons) of water at a temperature of 48° C. (about 120° F.). Concurrently Stratz recommends ichthyol-lanolin and vaginal tampons. In cases of tubercular origin hot-water injections are contraindicated. Should operative interference become necessary Stratz recommends lateral colpotomy for the removal of tumors or the evacuation of pyosalpinx, and believes this preferable to anterior or posterior colpotomy. In the lateral operation he opens the parametrium and avoids wounding the uterine artery. Stratz rightly contends that far too many cases of perimetric inflammations are operated upon, since chronic inflammation of the uterine adnexa never directly compromises the patient's life.